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# Using the Kinetic Family Drawing (K-F-D) to Assess Bowenian Dynamics In A Young Adult Population

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Using the Kinetic Family Drawing (K-F-D) to Assess Bowenian Dynamics in a Young  
Adult Population

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## ABSTRACT

### Using the Kinetic Family Drawing (K-F-D) to Assess Bowenian Dynamics in a Young Adult Population

This study sought to determine if the Kinetic Family Drawing (K-F-D) could be used by family therapists and other mental health professionals to uncover family dynamics that were in accordance with the theory of Murray Bowen. Specifically, the study investigated whether the drawing constructs of encapsulation/compartmentalization revealed perceived cutoffs in families, whether barriers in drawings revealed perceived distance in the family's of the individuals studied, and whether closely spaced figures represented a perceived lack of individuation in family's studied. Ninety-three undergraduate students participated in the study. The study was seminal, and meant as an initial exploration of the ideas presented. Three hypotheses were tested and analyzed using an ANOVA statistic. None of the hypotheses were supported by this research. Several limitations, including those involving sampling bias and the difficulties of conducting research on projective drawings are discussed. Suggestions for future research are made, focusing on changing the sample to concentrate on a clinical sample, increasing sample size, and expanding the definitions of the drawing variables to include different drawing constructs as well as the use of other systemic theories.

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## DEDICATION

To Zoe and Laura, without whom drawings would have no meaning.

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## Chapter I

### Introduction

Drawings have been used by mental health professionals as a way of accessing personal information for over a century. In early clinical use, drawings were used as a means of uncovering the unconscious, but were not utilized overtly for assessment or as a therapeutic intervention. As empirical and experiential evidence on the utility of drawings rose, so too did their use in practice.

Projective tests such as the Rorschach (Rorschach, 1921), the Draw-A-Person Test (Goodenough, 1926), and the Kinetic Family Drawing (Burns, 1982), impacted the field of psychology by bringing new and innovative ways to assess not only personality, but interpersonal dynamics as well. These methods were important because they placed difficult to reach information within relatively easy access to the trained clinician. Their continued use, although sometimes controversial, can be viewed as a testament to their efficacy and importance (Exner, 1993; Handler & Habenicht, 1994).

As the field of psychology evolves, and as the practice of art therapy expands, drawings are likely to become an ever-increasing part of the therapeutic milieu (Malchiodi, 1998a). Systems theory has only recently begun to embrace the use of art as a treatment modality. The value of art as a method of accessing data in systemic assessment is only beginning to be realized. Research is needed to allow therapists to

enhance their knowledge and use of this assessment tool, and to provide additional empirical evidence of its value. It was the goal of this study to begin to explore these ideas. This research evaluated the use of family drawings in systems assessment, focusing on concepts of Bowen's systems theory (Bowen, 1978).

### *Background*

Drawings have been used as a method of assessment since the 1920's, when Florence Goodenough researched the measurement of intelligence via artwork (Goodenough, 1926). Goodenough's research was a springboard for others, who varied her theme to present what we know about drawings today: there is the potential to understand aspects of personality, how one interacts with the world, and one's family dynamics by assessing various features of a drawing (Buck, 1948; Burns, 1982; Hammer, 1980; Koppitz, 1968). The techniques engendered a host of criticisms, some of which continue unabated to the present.

There are many who question the appropriateness of using art as a means of assessment. Critics point to the fact that drawings, when used as evaluative instruments, lack reliability because they cannot be scored consistently or quantifiably (Palmer, 1983; Palmer, et al, 2000; Sundbert, 1961). While many scoring systems exist for evaluating drawings (Goodenough, 1926; Koppitz, 1968; Mostkoff & Lazarus, 1983; Peterson & Hardin, 1997; Reynolds, 1978), it is true that there is no broadly accepted single scoring system. Another fairly consistent argument against the use of drawings for the purposes of interpretation centers on the belief that drawings are subject to interpreter bias (Scribner & Handler, 1987). While many researchers have addressed this by using systems that incorporate more than one scorer in the

evaluation (Peterson & Hardin, 1997), this criticism continues to persist. This presents the clinician wishing to use drawings as a means of assessment with an interesting dilemma. Does one use a device that has been researched with mixed results, or rely on other measures that may be more time consuming to obtain the same data? New research that supports the use of drawings as interpretive measures is necessary to support its continued use in practice, and provide additional data as to its validity and reliability as a means of assessment.

Many suggest that drawings are an expedient means to access data that is unconscious (Allan, 1978; Claman, 1980; Ulman, 1992). Traditionally used as a means to assess children (Malchiodi, 1998a; Machover, 1980; Peterson & Hardin, 1997; Rubin, 1984), the interpretation of drawings can also be implemented with adults (Furth, 1988; Holtz, Moran, & Brannigan, 1987), but has not been extensively researched in this population. It is also fairly well substantiated through both anecdotal and empirical data that drawings can be used to assess family dynamics, specifically regarding those centering around family relationships, and the feelings that each family member has towards the other members in the family system (Burns & Kaufman, 1972). Interestingly however, drawings have never been thoroughly researched from a systemic perspective, the theoretical approach to treating and evaluating family systems.

Systems theory focuses specifically on human interactions and how these impact the family and/or individual. The area began to develop shortly after World War II when interest in social phenomenon was beginning to rise, and the field of social psychiatry was gaining recognition (Broderick & Schrader, 1991). Systemic

thought has gained some acceptance as a viable means to assess and treat families and other naturally occurring groups of people (Pinsof & Wynne, 1995). As a therapeutic modality, systems thinking has proven to be valuable and, in the face of our world's ever changing landscape of family structures, it is likely that its influence will continue to grow well through this century (Shadish, Ragsdale, Glaser, & Montgomery, 1995).

Treatment techniques are similar to those of other theoretical approaches, but focus on the family as a whole, with family members being seen together in treatment (Goldenberg & Goldenberg, 1991). Techniques are mostly verbal, but also include non-verbal projective methods such as the family sculpture and family choreography. In the family sculpture, family members are physically placed by other members in the family in a position in space that best shows each person's relationships to the others (Sherman & Fredman, 1986). In family choreography, the family sculpture takes on action in an attempt to convey the changing patterns of interactional patterns between family members (Papp, 1976). The Kinetic Family Drawing (K-F-D) looks at the family pictorially through the use of a drawing of the family "doing something," but has not been tied to specific systemic theories (Handler & Habenicht, 1994).

One of the more influential systemic thinkers was Murray Bowen. Bowen began to develop his theory in the 1950's after working with schizophrenics and their families at The National Institutes of Health (Giat Roberto, 1992). Bowen's concepts center around how the emotionally laden messages one receives from family members resonate and impact functioning throughout each individual's lifespan (Friedman, 1991). Bowen's theory is intergenerational, and concentrates on others' emotional influences of which we may be unaware (Bowen, 1978). In this manner, Bowen's

theory appears rooted in the unconscious, something that has traditionally been explored by individual and psychoanalytic therapists (Freud, 1995; Jung, 1959).

Bowen's main hypotheses, specifically the concepts of differentiation and cutoff, are congruent with several of the main concepts of drawing interpretation. These concepts address the level of emotional connectedness between family members, and reflect how others in the family influence one's behaviors. Just as specific characteristics in drawings are purported to signify the artist's connection with others, in Bowen's theory specific actions are hypothesized to indicate how one feels about others. Thus, the two arenas of thought are congruent, but this congruence has not been studied empirically.

Spacing in drawings has been linked to degree of emotional closeness (Fury, Carlson & Sroufe, 1997; Holtz, Brannigan & Schofield, 1980; Hulse, 1951; Rabinowitz, 1991; Tharinger & Stark, 1990), and Bowen's theory focuses heavily on distance/fusion in relationships (Bowen, 1978). Research on the omission of figures or objects in drawings suggests the psychological absence, conflict, and/or denial of that object or figure (Furth, 1988; Handler & Habenicht, 1994; Peterson & Hardin, 1997). These concrete expressions may thus express emotional phenomenon such as closeness-distance and parallel Bowen's ideas on cutoff and differentiation. Both cutoff and fusion are concepts proposed by Bowen as anxiety reducing strategies to help family members deal with difficult emotions (Bowen, 1978). Thus, Bowen's hypotheses and assumptions and the concepts surrounding drawing interpretation appear to be similar.

### *Significance of the Study*

This study explored family phenomena from a perspective that has been researched only minimally (Fury, et al, 1997). There are no known studies that address the use of family drawings for systemic assessment, and the value of this study was seen as a way to aid the clinician by presenting empirical evidence on the use of drawings for treating families. This research has begun to establish the validity and reliability of such instruments, and adds knowledge to the use of drawings in the field of family therapy, specifically for those interested in pursuing family therapy from a Bowenian perspective.

This study explored the use of family drawings in assessment, and how specific aspects of Bowen's theory may be illustrated in family drawings. The study was seminal, and the results gathered are for the purpose of initial exploration. The study was conducted with an adult population, a group not typically studied with regard to projective drawings (Goodenough, 1926; Peterson & Hardin, 1997; Rubin, 1984). Therefore, the contribution to the field is twofold: it focuses on a population not extensively studied, and adds to the research on how family dynamics are presented in family drawings, from a Bowenian, systemic perspective.

No known studies have explored this area and the impact of such research has the potential to influence the field of family therapy and the clinician who wishes to utilize drawings from a Bowenian perspective in assessment. Research such as this provides the therapist with support for the use of an established clinical tool that will complement the more traditional verbal methods of uncovering family patterns such as the clinical interview and the genogram (McGoldrick & Gerson, 1985).



### *Statement of the Problem*

The outcome of research to evaluate the value of interpreting drawings has been variable, and the validity and reliability of using this method for assessment continues to come into question despite years of the use of projectives (Palmer, 1983). Empirical research is needed to support the claims that projective drawings are valuable instruments for diagnostic purposes, and for their use in new ways.

An increased understanding of how family dynamics may be presented in drawings from a systemic perspective is necessary. This study showed a different method by which to interpret data that is inherently systemic. Bowenian hypotheses had been chosen as the vehicle from which to explore drawings, because this systemic perspective appeared to be most congruent with the concepts that have already been researched, and aided in adding to the credibility of using a systems based theory to interpret drawings.

### *Research Questions*

Research was needed to establish the construct validity and reliability of the use of drawings in the adult population and interpreting the drawings exploring Bowenian family process. Drawings as projectives have been used with this population in the past (Furth, 1988), but have not been extensively empirically tested (Handler & Habenicht, 1994). Research in this area was conducted to support the construct validity of drawing interpretation with an adult population, and to demonstrate the versatility of an instrument that is already common.

A second question was whether projective drawings could portray family dynamics as described by Bowen (Bowen, 1978) and as perceived by the artist about

his or her family. Family drawings had never been researched from a systemic perspective, and this omission left a considerable gap in the literature. Studying the family is an integral part of systemic thought (Broderick & Schrader, 1991), and systems theorists may be inclined to use an instrument that is based on families. While family drawings, such as the Kinetic Family Drawing (K-F-D), (Burns & Kaufman, 1972), have been shown to convey information about the family, more research was needed to support the existing documentation of its utility. Additionally, research was needed to demonstrate how drawing interpretation can be used to convey information that is consistent with systemic theory.

### *Hypotheses*

Hypotheses for this study were as follows:

Hypothesis 1: Individuals who use encapsulation and/or compartmentalization in family drawings will have lower scores on the cutoff subscale of the FSAT than individuals who don't.

Hypothesis 2: Individuals who draw a figure(s) that touch, are crowded (at least one figure that intersects with another based on placement of a grid over the drawing and viewing where the lines on that grid fall on the figures), or overlap in a family drawing will have lower scores on the individuation subscale of the FSAT than those who don't.

Hypothesis 3: Individuals who draw family drawings with barriers contained within the drawing will have a higher score on the distancing subscale of the FSAT than those who don't.

### *Definition of Terms*

This study focused on several variables that had to be operationalized in order for complete understanding of all aspects of the study to be understood. Namely, definitions of the various concepts of drawing interpretation and the specific Bowenian principles to be addressed had to be understood in a precise manner. These elements of the study were essential to the research's premise, and were narrowly defined so as to provide a concise presentation of material.

These vital components were as follows (refer to Appendix A for scoring manual for further clarification of drawing variables):

1). Encapsulation/compartmentalization: Encapsulation occurs when the individual separates objects contained in the drawing by placing barriers completely around that object or figure (Peterson & Hardin, 1997). Compartmentalization, a concept that is very similar to encapsulation, involves the placing of boundaries around objects (Furth, 1988), but these boundaries are less clearly defined than encapsulation. In compartmentalization, the artist may draw objects apart from one another, but without a clear demarcation around the object (Furth, 1988). Both encapsulation and compartmentalization are thought to signify emotional distance (Furth, 1988; Peterson & Hardin, 1997), and will be thought of as one concept for the purposes of this study.

In this study, compartmentalization/encapsulation was defined and scored as present or absent through the guidelines set forth by Peterson and Hardin (1997):

Encapsulation: This is scored when drawn lines, objects or walls completely

enclose one or more individuals, separating them from the rest of the family.

The lines must be incorporated within the drawing to be scored as encapsulation. (p. 76)

Compartmentalization: This is scored when one or more family members are isolated from each other with lines, objects or walls that extend to (or close to) the edges of the paper. (p. 76)

2). Barriers: Barriers are objects that are placed between figures to separate them. In this study barriers will be defined as set forth by Peterson and Hardin (1997);

Barriers: This is scored when the child draws an object that provides an impediment between figures. The barrier may be realistic (e.g., a wall) or fanciful (e.g., a large flower). (p. 100)

Barriers are distinguished from encapsulation and compartmentalization because barriers do not extend to, or near, the edge of the page.

3). Differentiation: A core concept, Bowen proposed that the need for the individual to differentiate from his or her family-of-origin is vital to emotional growth (Bowen, 1978). By remaining undifferentiated, the person is unable to move on with his or her life because he or she is still attached to the original family through emotional ties he or she may be unaware of. The undifferentiated individual psychically binds his or her life to the family-of-origin and has difficulties with intimacy, social situations, and commitment to others (Bowen, 1978). Bowen defined differentiation as the ability to expand beyond what the family has provided, and be able to move through life guided by thinking rather than feeling.

For the purposes of this study, differentiation was defined by scores on the individuation scale of the FSAT (Dickinson, et al, 1996). Dickinson and colleagues define individuation as measured in their instrument as:

This subscale measures how much family members are able to maintain their individual identities when around other family members. Another way of looking at this scale is that it measures the amount that the family controls the behavior of family members. Fusion, as described by Bowen and others, is essentially a low level of individuation. (Dickinson, et al, 1996, p. 69)

4). Emotional cutoff: Cutoffs occur when family members withdraw from one another due to unresolved emotional ties. The withdrawal may be accomplished either emotionally or geographically. An emotional cutoff signifies an apparent avoidance of attachment. Bowen asserted that cutoffs typically involve families in which there is a high level of anxiety and emotional dependence (Bowen, 1978). In cutoffs, the person remains emotionally fused with the family even though they appear to have little to no contact with one another. The attachment to the family is perpetuated in subtle ways that bind the person emotionally to the family-of-origin. Thus, while not physically present, the family is never far from the person's emotional sense of being. A cutoff is generally considered to be a destructive pattern of coping in families where there are difficulties that span several generations (Bowen, 1978).

Emotional cutoff was defined by participant scores on the cutoff subscale of the FSAT. The authors of the FSAT define this subscale as:

Cutoff: Measures the extent to which one or more family members have

become isolated or "cutoff" from the rest of the family. Cutoff implies an active process of avoiding the rest of the family (or being forced by the rest of the family to stay away). (Dickinson, et al, 1996, p. 69)

5). Spacing/Crowding: Spacing refers to the way the objects or figures are placed on the page (Furth, 1988). Spacing may be crowded or far apart, and can often be determined by merely viewing the artwork with the naked eye (Furth, 1988; Malchiodi, 1998b). Conceptually, spacing is hypothesized to indicate emotional closeness (Malchiodi, 1998b; Reynolds, 1978).

For the purposes of this study, spacing was determined according to the checklist used in a study by Fury, Carlson, and Sroufe (1997), and was termed "crowding". In the Fury study, lack of individuation was linked to figures being crowded or overlapping. Because crowding is a subjective judgement of the rater, the definition for crowding in this study was adapted to include those figures that overlapped or touched, and crowding was defined as any figure that touches another, regardless of the plane of the figure. Crowding was determined through the use of a grid-like overlay similar to the one used by Burns and Kaufman (1972) in their manual on the K-F-D. Using the grid system, the rater placed the overlay on top of the drawing to determine if any figure touched another, regardless of where that figure was on the page. In this manner, figures that were "on top" of others but not physically touching, were considered as such based on their position on a vertical axis. Any figure that touched another based on an intersecting line of the grid was considered as "crowded." This was done by using the grid in the vertical axis in

relation to the page orientation of the drawing. Thus, the criterion was concrete, and rater bias was limited.

6). Distance: The concept of distance was associated with Bowen's ideas on how the family interacts with one another and manages stress (Bowen, 1978). In this study, distance was defined by high scores on this subscale of the FSAT (Dickinson, et al, 1996). The authors of the FSAT define distance as:

A "nuclear family emotional system" mechanism which families use to avoid dealing with stress or conflict in the family or to divert attention from unresolvable or toxic family issues. "Nuclear family" was used in the descriptions of the concept by Bowen, but these mechanisms apply to any core family group. The distancing subscale measures the extent that family members use various behaviors to keep physical and/or emotional distance from the rest of the family (Dickinson, et al, 1996, p. 69).

### *Limitations*

There were several limitations to this study.

The sample for this research was limited to students at a northeastern university whose population may or may not represent a random sampling of the population at large. As such, no generalizations to a broad spectrum of peoples can be made, and results should not be considered representative of any one specific group, other than the one being studied.

Cultural aspects of the participants in the study were not analyzed, and this variable may very well have been a significant contributor to outcomes. Previous studies have indicated that cultural aspects of the individual are revealed in drawings,

and do have an impact on interpretation (Court, 1989; Fortes, 1981; Handler & Habenicht, 1994). However, because the present research was seminal and was intended only to be an initial exploration of how the K-F-D may aid in assessing Bowenian concepts, not all confounding variables were intended to be studied. In addition, it was anticipated that there would be a high degree of homogeneity within the group that was studied for this research. Therefore, the impact of culture, in this study, was anticipated to be minimal.

Because of the design, outcomes for this research were not and cannot be considered cause and effect and, therefore, other factors that may have contributed to the outcomes cannot be discounted. For example, data on individuation can be linked to emotional closeness or a host of other factors such as large age differentials or geographic separations (Bank & Kahn, 1982).

The instrument that was used for this study, The Family Systems Assessment Tool (FSAT) (Dickinson, et al, 1996) was designed as a self-report measure. As such, it depended on the honesty and knowledge of the participant to provide accurate data, and relied on the participant to be aware of his or her family background, and report this in a true and consistent manner (Grotevant & Carlson, 1989). In addition, the variables presented were based on Bowenian theory which indicates one's perceptions of family, something that is not necessarily a true representation of what is actually going on in that family, or is an accurate depiction of that family's history.

Validity and reliability, like all research with projective measures, especially measures related to drawings (Palmer, et al, 2000), was a focus of concern for this research. Construct and convergent validity was addressed by correlating aspects of



the drawings with standardized measures that assessed similar concepts, and inter-rater reliability was dealt with by having more than one rater assess each drawing. These raters were only as accurate as their training dictated, and their training was of the view of the trainer. Therefore reliability, though controlled for, was viewed as a limitation of the study.

The phenomenon of spacing (the way figures appear on the page) was assessed in each drawing, through the measurement of encapsulation/compartmentalization and through the determination of the presence or absence of overlapping figures. This presented an issue because there were no clear guidelines in the literature regarding how to assess spacing, though several attempts at evaluating distances between and amongst figures had been attempted (Burns & Kaufman, 1972; Rabinowitz, 1991). Because human raters evaluated spacing in its variety of presentations, variability in interpretation was possible. However, the researcher strove to combat this issue by producing a standard for spacing that the raters could consistently follow (see scoring manual Appendix A).

Several aspects of drawings had been combined together as one variable for the purposes of this study. This was done to provide the flexibility needed to conduct seminal research, and to begin to establish scoring criteria that was consistent with systemic theory and principles. As such, multiple occurrences of certain aspects of drawings were scored the same as if they occurred once in each drawing, and as many as three drawing characteristics were considered as one variable. Additionally, the differences between many instances of specific phenomenon occurring in a drawing

versus one instance, and the separation of specific drawing characteristics (i.e. encapsulation and compartmentalization) were not considered.

An additional limitation that was taken in to consideration was the fact that the study only evaluated two generations of each family, and assessed the utility of using drawings to evaluate concepts of a theory that is based on family dynamics of at least three generations (Bowen, 1978). Because three-generations are not commonly presented in family drawings (Furth, 1988), the possibility of examining these types of relationships in drawings was viewed as difficult, especially when attempting to do so empirically.

## Chapter II

### Review of Related Literature

#### *Introduction*

This study examined family drawings from a systemic perspective, and demonstrated the value of using art as an assessment device in systems-based therapy.

The therapeutic use of art with families has a long and varied history, none of which addressed how art can reveal family dynamics from a Bowenian perspective. Empirical data was necessary to further the use of art-based projective instruments, specifically those that assess families. Bowen's theoretical framework was utilized to test the hypothesis that art could be used to reveal specific aspects about families. As such, a comprehensive understanding about the utility of art in the helping professions, the various aspects of art used for interpretation of personality dynamics, and of the theory of Murray Bowen is necessary to fully understand the importance of this study, and its place in the field of family therapy.

#### *Systemic Theory According to Bowen*

A premise of this study is that specific systemic notions may be conveyed through drawings. The researcher chose the theory of Murray Bowen as the context through which to study this phenomenon. As such, a brief outline of his theory

appears here, focusing on the three areas being studied: differentiation, cutoff, and distance.

Systems theory focuses on a family's involvement with one another, and with the outside world. As a phenomenon, the earliest systems research began shortly after World War II, when interest in social psychiatry began to develop. This interest eventually grew and led to the development of the field of marriage and family therapy, which focuses on inter-relationships between parties of a family or system and how these interrelationships enhance and inhibit human interaction (Broderick & Schrader, 1991). Systems theory has continued to expand over time, and has evolved a theoretical framework that has been extensively researched and accepted in the helping professions. Systems theory today is vastly different than it was at its inception, and is only expected to grow and change with the coming times.

Murray Bowen, considered one of the more influential systems thinkers, developed his theory out of his work with schizophrenics in the mid-1950's (Giat Roberto, 1992). Bowen studied the dysfunctional patterns that developed between parents and their psychotic offspring. Bowen began his research by just observing mother-child dyads but eventually included fathers and other family members as well. Bowen observed these families over a period of time and began to predict behaviors between these family members, as well as develop his ideas for what would become his model of systems (Giat Roberto, 1992). Bowen was also profoundly influenced by his own exploration of his family-of-origin and this work strongly guides his theory.

Bowen's initial theory was divided into six main concepts, each focused on a different aspect of the family system. These included: differentiation, triangles, family

projection process, multigenerational transmission process, nuclear emotional family system, and sibling position. At a later time, emotional cutoffs and societal regression were added. Bowen integrated these two concepts when he recognized the influence of society in familial issues (Papero, 1983).

### *Differentiation of Self*

The concept of differentiation of self is the cornerstone of Bowen's theory, and it is this that drives the rest of Bowen's thinking. Bowen asserted that each person is intrinsically tied to his or her family-of-origin through the emotional bonds between people. Bowen hypothesized that differentiation exists on a continuum, with the low end of this continuum signifying extreme dysfunction (and lacking differentiation) and the high end representing emotional health. At the low end, Bowen proposed family members to be fused, or undifferentiated. At the other end, individuals are able to separate thinking from feelings and engage in healthy, intimate relationships (Bowen, 1978; Friedman, 1991; Goldenberg & Goldenberg, 1991). Individuals who are differentiated are no longer guided by the thoughts and feelings of others, and have developed a maturity that includes total emotional independence (this is a state that is rarely attained). These are individuals who, as Bowen termed it, have developed the solid self (Bowen, 1978).

Individuals who have a solid self remain stable when under stress, and are not unduly influenced by those who exist in that person's relationship system (Bowen, 1978). This contrasts with individuals who present with a pseudo-self or with persons who are undifferentiated. When one is undifferentiated, he or she is driven by emotion, is dependent, and lacks the capacity to be autonomous. Undifferentiated

individuals find it difficult to deal with problems rationally, and tend to be behaviorally rigid in emotionally intense situations (Goldenberg & Goldenberg, 1991). They are in a constant search for love and security, and these individuals do not deal well with stress. When confronted with difficult issues, undifferentiated individuals may decompensate, may resort to psychosomatic complaints in order to deflect the stress of their difficulties, or become otherwise mentally ill.

Bowen described undifferentiated individuals as being guided by feelings, rather than by intellect or rationality (Bowen, 1978). The goal of Bowenian therapy is to have the thinking guide the emotions. While not going through the day in a haphazard manner, individuals who lack differentiation are constantly being guided by the influence of others and thus, are not able to achieve a high sense of emotional security or healthy intimacy with others. Undifferentiated individuals may appear to function well to others, but difficulties are quick to arise when under stress. These individuals are emotionally fused with their family-of-origin, and are constantly using external forces to influence others in order to be perceived as more important than he or she actually is (Bowen, 1978).

Bowen stressed the fact that no one ever completely emotionally separates from his or her family-of-origin, and this is not the goal. There is a delicate balance between having the individual grow, and remain rooted toward the family. Neither extreme is beneficial, and this is a struggle that we all must go through, and continue to go through during our lifetime. Bowen proposed that differentiation was a goal to be achieved. An outcome of becoming differentiate is that personal responsibility for

one's actions is taken, and blame is not placed on others or on the family system (Friedman, 1991).

### *Triangles*

Emotional triangles exist in all systems (Friedman, 1991). A triangle exists when a person or object is drawn in to diffuse anxiety between two other people (Giat Roberto, 1992). This is thought to reduce the anxiety of the dyad, and to take the focus from the issue that existed between the two originating parties. A classic example of a triangle occurs when a marital couple focuses on problems with a particular child, rather than focus on the issues that exist in their marriage. Thus, the family can concentrate on the "problem" child rather than acknowledge the fact that they have marital difficulties.

Triangles relate to differentiation because families who lack a high degree of differentiation (families that are "fused") tend to form multiple rigid triangles. The person who is least differentiated is the most vulnerable to being used to dilute the anxiety between two conflicting family members (Bowen, 1978). Further, Bowen contended that triangles are necessary for any two people to maintain their respective levels of differentiation by drawing in a third person (Friedman, 1991).

Bowen believed that triangles are stabilizing forces in families, and did not look upon them as overtly dysfunctional. For Bowen, triangles can be productive components of the family system and create harmony. This may be demonstrated when a child is added to a previously conflictual marriage (Goldenberg & Goldenberg, 1991). However, multiple and interlocking rigid triangles cause difficulty for the family, and these must be addressed in order for the individual in the family to grow and develop fully to capacity (Giat Roberto, 1992).

Bowen recognized that therapists often become part of triangles, and that the mere presence of a therapist in a two party system creates a triangle (Friedman, 1991). Thus, the therapist must take care not to become a dysfunctional part of this system, and must address and diffuse the anxiety that may be present in the dyad. In doing so, the therapist advocates change and transformation (Friedman, 1991).

#### *Family Projection Process*

Family projection process is a concept that resembles the idea of projection in psychoanalytic thought. Basically, family projection process describes the way in which problems are passed from parent to child in a nuclear family (Bowen, 1978; Giat Roberto, 1992). Often, a particular child is chosen to be the focus of the parents' attention for reasons that are tied to the parent's relationship, the circumstances surrounding the birth of that child, the temperament of that child, the relationship the child has with one or both of his or her parents, or some other factor (Giat Roberto, 1992). Regardless of cause, family projection process inhibits the emotional growth of the child and is a factor in his or her differentiation from the family-of-origin.

Bowen asserted that parents, especially parents who lack maturity and are undifferentiated, choose the child who is the most emotionally immature to fuse with them. Thus, this child remains dysfunctionally tied to the family and, in turn, becomes undifferentiated him/herself (Bowen, 1978). This is done regardless of birth order and is not necessarily done with the youngest child of the family.

#### *Multigenerational Transmission Process*

Bowen proposed that all generations of the family are tied together through not only their relationships with one another, but through their respective levels of



differentiation as well (Bowen, 1978; Giat Roberto, 1992). Bowen viewed marital pairs as being involved and attracted to one another through how well they have differentiated from their family-of-origin (Giat Roberto, 1992). These marital partners join with their pasts intact, and these pasts intertwine to resonate through and shape the future.

Bowen viewed the past, present, and future as interconnected. He contended that family interactions are generational, and that patterns repeat themselves throughout time (Friedman, 1991). One can learn much about the family system by researching the past, and identifying patterns that pervade the generations.

Bowen identified the multigenerational transmission process as the method by which overall patterns that the family has established to cope with concerns are projected down through the generations (Bowen, 1978). This will impact certain children more, because one or both parents will have singled out these children as a vehicle for their projections. Thus, the impact of these projections will vary considerably from child to child within a given family.

#### *Nuclear Family Emotional System*

The nuclear family emotional system is, again, tied to differentiation. In essence, this is the range of relationship patterns in the family, specifically focusing on the patterns between the parents and their children (Bowen, 1978). Bowen contended that each marital partner brings to the marriage patterns that have been established in his or her family-of-origin. In doing so, marital dynamics are set up wherein one partner may be more tied to, or more undifferentiated from, his or her family-of-origin than the other. Though Bowen proposed that marital pairs select one another based on

having achieved similar levels of differentiation, he also stated that marital partners with low differentiation levels will be emotionally fused in the marriage and have difficulties (Bowen, 1978).

The nuclear family emotional system integrated two of Bowen's concepts, differentiation and multigenerational transmission process, as its main focus (Friedman, 1991), but includes other concepts as well. In Bowen's terms, the nuclear family emotional system includes all information that is traditionally placed on the genogram. Thus, this concept addresses the family's relationships with one another, the patterns established in the family, the cultural influences that impact the family, triangles that may exist, levels of anxiety within the family, and any other important data (Friedman, 1991). Patterns are established in the emotional system and, according to Bowen, passed down through the generations (Bowen, 1978). Bowen focused on this information merely as content for the therapist and not on the causes for emotional difficulties (Friedman, 1991). In doing so, Bowen again shifted blame away from specific incidents that have occurred and left the responsibility for action and change on the family as a whole.

### *Cutoff*

Cutoffs are a way of managing anxiety in the family (Kerr & Bowen, 1988). A cut-off may occur when an individual cannot manage unresolved conflict with his or her parents and begins to create distance from that family. This concept, like the other concepts of Bowen's theory, is also based on differentiation. Bowen postulated that the lower the level of differentiation for the individual, the more intense the cutoff from family will be (Bowen, 1978).

Cutoffs may be manifested in a variety of ways. Individual members may isolate themselves, physically distance themselves from one another, or be emotionally distant. Regardless of the way the cutoff is handled, the individual, though seemingly separate from family, remains tied to the family through his or her emotional dependence (Bowen, 1978). Bowen noted that cutoffs arise generationally, and that the existence of a cutoff in one generation is likely to be replicated in the next (Kerr & Bowen, 1988).

A cutoff is a denial of the self, and the individual who is cutoff from his or her family-of-origin is likely to exaggerate that cutoff with his or her spouse (Bowen, 1978). Individuals who are cutoff tend to be impulsive, and have difficulties with conflict and intimacy (Bowen, 1978). Many of these individuals mistakenly believe that the distance they create causes them to be independent from their families. However, according to Bowen, this is not true. Cutoff individuals continue to remain emotionally tied to their families-of-origin because they cannot be objective about the family. This is attributed to the fusion and lack of differentiation from the family, and because these individuals tend to repeat the same patterns that they have rejected into the next generation (multi-generation process) (Kerr & Bowen, 1988).

Bowen theorized that remaining cutoff from one's family-of-origin would increase anxiety by not allowing the resolution of issues to take place because of a lack of differentiation. He proposed that only by being involved and remaining emotionally free of the family dynamics can one evoke change and increase differentiation (Kerr & Bowen, 1988). Thus, the individual takes personal responsibility for his or her actions and cannot "blame" family members for his or her

negative behaviors.

### *Sibling Position*

Bowen's concept of sibling position was derived from research that had been done by Toman in the early 1960's. Toman's premise was that siblings in a family take on certain roles and personality traits based upon their birth position in the family. He suggested that these roles were relatively fixed, unless there were five or more years separating the siblings at which point birth order data became moot (Toman, 1961).

Bowen extended Toman's research conclusions, and incorporated systemic thinking into the theory. Rather than focus on the biological position of a child, Bowen's focused on the functional position of the child (Kerr & Bowen, 1988). He posited that not all first-borns are the same, and that characteristics about birth order cannot be categorized as rigidly as they were by Toman. Bowen's focus was much more on how the family interacts with one another and the impact of sibling position on marital pairs.

Bowen asserted that goodness-of-fit between partners in marriage often mirrors how children were ordered as siblings within their original family system (Kerr & Bowen, 1988). For example, an emotionally healthy first-born married to an emotionally healthy last-born might be a positive pairing because it reflects the roles these two individuals had in their families-of-origin. Bowen linked sibling position and differentiation because functional positions within the family as have inherently different levels of differentiation (Kerr & Bowen, 1988).

### *Societal Regression*

Societal regression was the last proposed, and least developed, of all of Bowen's concepts (Goldenberg & Goldenberg, 1991). Societal regression suggests that the society that one is living in will impact differentiation in times of global societal stress. For example, in times where there may be a population explosion and coinciding limited resources, that society may undergo stress wherein it's constituents suffer and remain undifferentiated (Bowen, 1978). To Bowen, society acted as a family by providing an emotional system that is prone to developing anxiety, lack of differentiation, creating triangles, and multiple generational transmissions of its own (Friedman, 1991). Bowen believed this had occurred more frequently in recent times, and he maintained a somewhat pessimistic view towards the future of society (Goldenberg & Goldenberg, 1991).

### *Relationship between Art and Bowenian Theory*

There have been few studies that link Bowenian theory to the concepts of art therapy or art interpretation. Fury and associates (1997) explored spacing in drawings and the concept of individuation, hypothesizing that crowding of figures in drawings signified a lack of individuation or fusion with the family. Although this hypothesis was not supported, the participants were children at risk for difficulties, and cannot be generalized to either an adult or a not at-risk population.

A search of databases from 1980 to the present failed to identify other research that specifically linked Bowenian theory and drawing. Whether or not current research is being conducted is not known. Because the concepts of Bowenian theory and the concepts of art interpretation appear to be congruent, their relationship to one

another are worthy of exploration. Empirical data that supports the hypothesis that Bowenian theoretical principles can be linked to symbols in drawings would give systemic clinicians a valuable therapeutic tool from which to work, and provide a theoretical framework for the K-F-D. The value of this study is that it attempted to help to determine the construct validity of the K-F-D, and added to the limited literature on the topic.

Studies that assess family dynamics and how they are revealed through art have all focused on the same type of data on family drawings, or on how family dynamics are reflected in the K-F-D (Hackbarth, Murphy & McQuary, 1991; Handler & Habenicht, 1994; Holtz, et al., 1980; Holtz, et al., 1987; Hulse, 1951; Rabinowitz, 1991; Shearn & Russell, 1969; Sims, 1974). No studies that link specific theory and interpretative data on art were found, and research with adults is extremely lacking in the literature. It is probable that interpretations of art can be linked to systemic theory, and this was a main goal of this study.

### *History of Art in Psychology and Related Helping Fields*

From the earliest to modern times, art has woven in and out of the fabric of the field of psychology, and has been considered a window into the person who has created it. Using art to explain human phenomena has a long and varied history. Before Freud and Jung used drawings as a means of understanding certain aspects of the individual, art was shown to convey productive information about the artist. Current thinking varies from emphasizing the therapeutic nature of creating art, to stressing the benefits of viewing pieces of art, to the more traditional view of focusing on the symbolism that the art conveys, along with its relationship to its creator.

Regardless of viewpoint, it is the drawings that the individual has created that have garnered the most attention in the helping professions, and what most of the therapeutic focus has been upon throughout time.

While modern psychologists may trace the origins of using art in therapy to Freud, it is noted that ancient civilizations used art in the form of hieroglyphics to display meaningful aspects of their society (Malchiodi, 1998a; Peterson & Hardin, 1997). It is from these portrayals that we have gained insight into past cultures, and have been able to expand our own knowledge of self as a result. Hieroglyphics are a pictological alphabet that have allowed us to see how people lived, what was important to these peoples, and how we can learn from those who lived long ago. None of this would have been possible without art, and no other form of communication from these times has given us the knowledge that we have gained from these depictions. As such, art from this time is an invaluable resource, even as we look upon it today.

While hieroglyphics demonstrate how art can convey information about a group of people, more recently art has been used to understand the individual. Freud is often thought of as an innovator in this endeavor. He considered art a complement to dreams, in that art would allow the observer to have a window into the psyche and give a view of the important, often hidden, aspects of individual psychological make-up. He developed his theories on art interpretation from his ideas of the unconscious. He noted that many of his clients could not describe or detail their dreams, but stated that their visions could be depicted in a drawing (Malchiodi, 1998a). This led to his belief that drawings, like dreams, could give the clinician a glimpse of the unconscious

and could provide valuable information that could not be accessed through verbal interventions (Levy, 1958).

Freud's ideas were expanded by Jung, who used art as a focal point of his theories on personality and the unconscious. Jung's theory of archetypes lends itself well to the field, and it is Jung, more than Freud, who is remembered for his contributions to what has become known as art therapy. Jung, an artist himself, developed the concept of a collective unconscious in which symbols and certain aspects of culture would be passed from one generation to the next by artistic impressions. He utilized mandalas (circular drawings) in his work with patients, and also brought in artwork to help uncover emotionally laden issues that lay in the unconscious (Jung, 1959). He developed an understanding of what certain symbols might mean when depicted in drawings, and felt that the cathartic process that comes with producing art would soothe the individual and help rid each client of the pains of emotional distress. Jung believed that the symbols that occur in both fantasy and drawing are the psyche's way of attempting to heal itself (Jung, 1956; 1959). Jung was a champion of using art in, or as, therapy, and his early influence continues to resonate through the field today.

During the latter half of the 1800's and into the early 1900's art began to be viewed as a medium that could reveal information about the artist's pathology, specifically with regard to mental illness. Ambroise Tardieu, a French psychiatrist, first recognized that people with mental illness produced artwork with strikingly similar characteristics (Malchiodi, 1998a). Tardieu's ideas drew the attention of another French psychiatrist, Max Simon, who noted in both 1876 and 1888 that



several of his more severely disturbed psychiatric patients drew pictures that were laden with what he believed to be symbolism and scenes of an obscene nature (Hammer, 1980; Malchiodi, 1998a). Thus, there was a shift from earlier ideas that focused on the unconscious, to the thought that personality and psychological make-up could be reflected in artwork- -something more conscious. The theories of Tardieu and Simon planted the seeds for later researchers, who expanded them into some of the hypotheses later used in the development of projective testing. These instruments utilize art as the base to determine aspects of the subject's personality and interpersonal/familial dynamics.

Projective testing via the use of drawings came about indirectly through the work of Florence Goodenough who discovered the value of art in her research on intelligence testing (Hammer, 1980). Initially, Goodenough believed that the number of details in an individual's drawing would lend themselves to assisting in determining the intelligence of that person. Specifically, Goodenough chose to ask her subjects, who were children, to draw pictures of a man- -presumably because of the universality and familiarity of the subject matter (Malchiodi, 1998b). Goodenough developed a scoring system by which a child's drawing was evaluated for the presence or absence of specific criteria (Harris, 1963). The child was given points toward a total score that was then placed on a scale that took development into account. In doing this, a final single score was garnered that Goodenough believed revealed the child's intellectual capacities (Harris, 1963).

Goodenough noted that drawings also permitted the observer to have insight into the artist's personality. She began to group drawings by type and theme, and

discovered that people with similar personalities tended to draw similar figures and scenes. This led to hypotheses about the value of using drawings to assess personality.

Havik and Bender (Havik, 1953), researchers investigating intelligence independent of Goodenough, were both examining children's drawings when they came to the same conclusions as Goodenough. These researchers concluded that children who had emotional disturbances did not draw to the level of their intellectual functioning. Rather, the drawings were impaired by the psychological difficulties the children were undergoing. This finding led to further research and, in turn, led to conclusions regarding drawings and intelligence. Ultimately it was discovered that children draw more from emotion than from intelligence (Hammer, 1980).

Karen Machover built on the work of these earlier researchers and also refuted the notion that drawings could reveal data about the level of intelligence of the artist. Machover's research led her to conclude that drawings revealed aspects of the personality of the person who drew the picture (Hammer, 1980; Machover, 1949). Machover's work was rooted in psychoanalysis, and her conclusions based on her belief that drawings were uniquely tied with the unconscious as well as the individual's anxieties, impulses, defenses, and internal conflicts (Malchiodi, 1998a). She developed the Draw-A-Person test, a projective instrument that is used mainly with children. In this test the examiner asks the subject to draw the human form. Machover interpreted the drawing by assessing things such as shading, erasures, size, and symmetry (Machover, 1980). She also noted various components of the drawing, such as the clothing or body parts, and made interpretations on the way that the items were drawn. For example, Machover suggested that toes indicate aggressiveness and

that hair indicates virility (Machover, 1980). Machover based her findings on her observations that people with similar psychological make-ups drew in a like manner. Her method of evaluating a drawing is interpretation, not scoring. The Draw-A-Person test continues to be in wide use as a means of evaluating personality at the present time.

Koppitz also began her work looking at the relationship between intelligence and drawing. Unlike Machover, Koppitz (1968) recognized the developmental aspect to drawings and developed an inventory of drawing milestones that children typically reach. Koppitz's presentation was less psychoanalytic than Machover's, and focused instead on the interpersonal dynamics that can be revealed through the drawing of human figures (Malchiodi, 1998b). Koppitz developed a scoring system for the evaluation of drawings and quantified her indicators based on the quality of the drawing, omissions, and spontaneously drawn items (Peterson & Hardin, 1997). Koppitz identified 30 indicators of emotion, and each is scored as either present or absent (Peterson & Hardin, 1997). Some of Koppitz's emotional indicators include: poor integration of parts, large hands, shading of the face, transparencies, teeth, missing body parts, clouds, and crossed eyes (Koppitz, 1968). Koppitz's theory was grounded in the present life of the artist, and based in ego psychology. Koppitz's work also diverged from others in that it focused on conscious, rather than unconscious data.

Like Machover's Draw-A-Person test, Buck's House-Tree-Person test (H-T-P) was developed as an intelligence test. Buck and Machover made their discoveries about drawing and personality dynamics concurrently, though each was

working independently of the other (Hammer, 1980). Buck's H-T-P expanded on Machover's, in that drawings of a human figure are a part of the test, but there are also drawings of a house and tree. It is hypothesized that the house represents thoughts and feelings about the home, the tree projects data about the individual's surroundings and environment, and the human figure, feelings about the self (Malchiodi, 1998b). Again, this test is mostly used with children and is projective in nature (Malchiodi, 1998b).

The most widely known projective test, the Rorschach test, was developed in 1921 by Hermann Rorschach who patterned the test after a German child's game (Exner, 1993). The client is asked to look at a series of inkblots and state what the blot looks like to him or her. After a series of questions the client's responses are analyzed to determine aspects of that individual's personality, or evidence of pathology. While the Rorschach test has garnered its share of criticism (Zubin, Eron & Schumer, 1965; Jensen, 1958), it continues to be used, and it is the instrument that has garnered the most media attention.

Projective testing using drawings began to include the issues of family in the 1930's when Appel and Wolff first requested that children draw their families (Malchiodi, 1998b). However, the importance of family drawings gained recognition in the early 1950's when Hulse began studying children's drawings of their families (Hulse, 1951). Hulse differed from earlier researchers by focusing not on individual characteristics of the drawings, but on the global perspective one gets when viewing the drawing. Hulse believed that children projected the feelings that they have toward family members into their drawings, and that information on family dynamics, home

life, and sibling relationships can be accessed by having a child draw his or her family (Malchioldi, 1998b).

In 1970 Burns and Kaufman expanded on Hulse's ideas and developed the Kinetic Family Drawing (K-F-D) (Sims, 1974), in which the subject draws a picture of his or her family engaged in some unspecified activity. As with the other instruments, the clinician then analyzes the drawing in an attempt to decipher specific cues in the drawing that signify difficulties or emotionally-laden areas. Their scoring of the K-F-D is accomplished by examining four main categories: evaluating the actions presented, the physical characteristics of the family, evaluating spacing and barriers placed in the drawings, and the style of the drawing (Burns & Kaufman, 1972; Handler & Habenicht, 1994). Burns and Kaufman believed that by adding the element of action to drawings, the subject would provide more data to be analyzed including information on interpersonal relationships (Handler & Habenicht, 1994). All of these projective instruments were developed over time, and with a considerable amount of energy spent on proving their reliability and validity.

Buck's, Machover's, Rorschach's, Burns', Hulse's, and Goodenough's research, their theories, and consequent testing instruments, are predicated on the notion that the unconscious can be made overt on paper through the artist's work. The tests, being projective in nature, reveal the internal mechanisms of the person, rather than what may be apparent in session. Their value for the therapist is that they can help uncover issues that may not be known, but that may be troublesome to the artist. In this manner, the work of these researchers built on the earlier theories of Freud and Jung who proposed the tie between the unconscious and artwork.

*Reliability and Validity of Using Art as a Projective Instrument*

One goal of this study was to enhance the existing literature on the validity and reliability of the use of drawings for diagnostic purposes. Several studies have been conducted on the use of drawings, most of which have included data on reliability and validity. These studies have identified conflicting information regarding the applicability of using drawings for diagnostics, leaving some question about their use (Handler & Habenicht, 1994). New empirical data was necessary to support earlier claims of the utility of drawings in the helping professions, as well as to establish the reliability and validity of their use.

When a test measures what it purports to be measuring it is said to be valid (Vogt, 1993). When a test is reliable, it is consistent, stable, and free of random error (Vogt, 1993). There are several types of reliability and validity, each measuring similar, but not identical concepts. This study focused on construct validity which measures the extent to which variables accurately measure the constructs of interest (Vogt, 1993). In this study the constructs that were measured were three concepts hypothesized by Bowen: cutoff, individuation, and sibling position. The study also used interrater reliability to enhance its design. Interrater reliability exists when the raters agree on the judgements they have made on the phenomenon they have been asked to assess (Cicchetti & Sparrow, 1981; Vogt, 1993).

Establishing reliability and validity of projective drawings is a complex task, and is complicated by the nature of drawings in general. Drawings are highly variable from person to person, and can be both rich and complex (Palmer, et al., 2000). There are many issues to be aware of that may impact drawings. Some of these issues

include: cultural variability (Handler & Habenicht, 1994), societal influence, developmental aspects, and idiosyncratic style. Several variables can affect the way one draws, and drawings produced one day may vary considerably from those produced the next. The drawing must be viewed and evaluated not only in the total context of the picture, but by incorporating the symbols present as well (Furth, 1988).

There is no standard method of scoring the K-F-D, and interpretation has been traditionally done subjectively (Burns & Kaufman, 1970; McPhee & Wegner, 1976). A few researchers have attempted to create objective scoring measures, but have only been minimally successful (Myers, 1978; O'Brien & Patton, 1974; Reynolds, 1978). Thus, variants in scoring exist which brings into question whether the drawing would be evaluated similarly across scoring criteria. Regardless of concerns about consistency in scoring, empirical research has been conducted that addresses reliability and validity in drawings.

Reliability and validity studies have been done on projective tests in two ways- qualitatively and quantitatively. In qualitative analysis, researchers determined reliability by identifying similarities in drawings among individuals who had experienced the same or similar events and circumstances (Peterson & Hardin, 1997). Qualitative validity was ascertained if aspects of the drawing did, in fact, reflect the pathology of the artist (Peterson & Hardin, 1997). That is, if portions of the drawing reflected the known pathology of an individual, the technique for interpreting the drawing was considered to be valid.

In quantitative analysis, scoring is standardized to show frequency of specific aspects of drawings, with irregularities in content marked to be considered for the

presence of possible pathology (Peterson & Hardin, 1997). In this form, a table is frequently devised for all raters to look for the same criteria. Quantitative analysis of drawings takes development into account, and bases its assumptions on how a child will normally develop drawing skills throughout time (Peterson & Hardin, 1997).

A main area of concern in testing is reliability. Because drawing interpretation is subjective, and because there are a limitless number of possible outcomes (Clark, 1995), it is imperative that scoring is done as consistently as possible. One type of reliability, inter-rater reliability, is addressed by determining if two or more raters would perceive, and then score, the drawing in the same way (Peterson & Hardin, 1997).

Often an area of criticism, the reliability and validity of projective testing has long been, and continues to be, controversial. More recently, critiques have included the lack of updating, and neglect of the gender or cultural differences of the subject in interpretation and evaluation (Malchiodi, 1998b).

### *Art as Therapy*

This study attempted to show how drawings can be used in treatment as diagnostic tools for the systemic therapist. In doing so, it is necessary to review the use of drawings in the helping professions to demonstrate how, and when, drawings are used for purposes other than as a means for assessment. Giving a global picture of the use of drawings promotes the idea of their utility, and provides a well-rounded picture of this tool as both an intervention and as a diagnostic measure.

From its origins in psychoanalytic thought through the research and development of projective testing, the idea of using art in a clinical setting has



garnered a certain amount of acceptance. Art as a component of therapy initially focused on, and was researched as, a function of the unconscious. Eventually, research turned to how art could be used clinically, other than as a means of diagnosing personality issues. The focus became on the therapeutic value of producing a piece of art, and grew into what is now considered to be the art therapy movement.

Margaret Naumberg, considered an innovator of the art therapy movement, was one of the first to recognize how art could be used simply for the value of its practice (Landgarten, 1981; Ulman, 1992). The genesis of her theory lies in the realm of psychoanalysis. Naumberg, in the 1940's, used art as a means of free association for her patients (Wadeson, 1980). Through her clinical experience, Naumberg came to see the usefulness in asking the individual to use his or her creative processes as a cathartic intervention. Her focus turned from the meaning behind the art, to the creation of art itself. Naumberg demonstrated that art is a healing mechanism that could be used to allow for non-verbal expression and communication.

Naumberg, who worked with both children and adults but whose major studies focused on children in an academic setting, began to conceptualize art as a form of symbolic expression between client and therapist. She focused on art as it was spontaneously created rather than as prescribed, as in the case of projective testing (Malchiodi, 1998b).

Naumberg's work was closely followed by that of Edith Kramer who also stressed the interpersonal value of producing art (Wadeson, 1980). Kramer was an artist and educator who concentrated on the creative process. Kramer asserted that, for

children, creating art was an act of sublimation in that it allowed the child to change impulses into images (Malchiodi, 1998b). Kramer advocated for greater involvement by the therapist in the creative process, even to the point of the therapist assisting the client in developing art skills.

Donald Winnicott, a pediatrician, also emphasized how art can have a healing effect on children. Winnicott developed the squiggle game wherein the child would be asked to create a picture out of a squiggle that another person has drawn on a piece of paper (Winnicott, 1971). The game could continue with each person contributing to an ever-evolving creation that changes with each person's input. This is believed to be a form of communication between parties, and is more interactive than similar art therapy techniques. Winnicott's emphasis is not on the projective meaning behind the squiggles, but rather the communication that can be initiated between therapist and client as a result of playing the game (Malchiodi, 1998b). While some data can be interpreted from playing this game, it is the interaction that is stressed. Because of this, some believe the squiggle game to be a play therapy technique (Malchiodi, 1998b).

Early art therapy researchers such as Naumberg and Kramer concentrated on the individual and how that person can be affected by art. It wasn't until 1960 that Hanna Yaxa Kwiatkowska expanded the field of art therapy to include families (Wadson, 1980). Kwiatkowska assigned families art projects to be done cooperatively, and observed the interactions between family members. She believed that, through art projects, therapists could gain insight into a family's ways of communicating with one another, how they get along with each other, their roles, and

the general dynamics of the family. Through Kwiatkowska's work, therapists now have an arsenal of art activities that they can assign families so that their underlying dynamics can be better understood.

Today, both individuals and groups take part in art therapy and, once considered "alternative," art therapy is part of the mainstream of treatments utilized at major centers across the United States (Landgarten, 1981).

### *Developmental Aspects of Drawing*

The ability to draw does not develop in a vacuum. Like all milestones, the capability of drawing takes place over a period of time. It is essential that the clinician who wishes to use drawings in practice understand how drawing ability develops so that he or she can make accurate assessments of drawings done for treatment purposes. Knowledge of developmental factors in drawing helps to delineate "normal" symbols from those that are pathological. While this study did not take developmental factors into account because it focused on an adult population when development is complete and changes are minimal, if present at all, these factors should be considered when evaluating drawings and are delineated here for the edification of the reader.

Drawing ability develops sequentially over time. There is a fairly consistent pattern by which a child develops the ability to draw, and researchers have spent years looking into the significance of children's art at the various stages of development. The phases of artistic development may be parallel to similar phases that occur in cognitive development. Specifically, artistic growth mirrors the growth of the child in ways of learning, sociability, and familial understanding.

Children's art is interpreted the same as adult art, yet the significance of what is present changes and is dependent on the child's stage in development (Machover, 1980). For example, a child drawing sticks for arms or legs may reflect a problem with immobility, just as it does for an adult who draws this way. However, a child's mobility may be a direct reflection of his or her dependency, and not on a pathological need to remain psychically immobile. A child is not yet concerned with their middle body, and this is reflected in his or her artwork when the human form is drawn as a head with legs.

Children almost universally use shading in their drawings, something that is proposed to signify that the producer suffers from insecurity (Machover, 1980). Insecurity is a developmentally appropriate feeling to have as a child, but one that may be a cause for some alarm in an adult. Thus, while the interpretation of a specific feature is the same, the meaning and significance, is vastly different. For that reason, assessors need to have a comprehensive understanding of the stages of human development, and of artistic development of the child as well (Malchiodi, 1998b).

A child's earliest art skills appear as mere scribbles on the page. This phase typically lasts from age 18 months to three years (Malchiodi, 1998b) and coincides with Piaget's sensorimotor phase (Piaget, 1959). Scribbling begins as random marks on the page, then moves to lines, and eventually culminates in the child making circles (Malchiodi, 1998b). Early researchers believed that a child's scribbles were meaningless (Burt, 1921; Goodenough, 1926), but more current studies show that a child's scribbles often represent something in that child's life (Gardner, 1980; Malchiodi, 1998b). A child, when asked, is usually able to state what he or she has

drawn. Often, the child who created a piece of scribble art can easily explain what appears, to an adult, to be a random series of lines and circles.

In the earliest stages of drawing, a child is learning to manipulate not only the art materials, but his or her world as well (Rubin, 1984). The child is learning about form and the ability to control stimuli. Graphomotor skills develop during this time and assist the child throughout his or her life, when such skills will be necessary to navigate the world (Kellogg, 1969).

In the next stage, the preschematic stage, the child begins to draw rudimentary forms and representational symbols (Malchiodi, 1998b). This stage typically lasts from four until seven years, and coincides with Piaget's preoperational period in which the child is learning about numbers and symbolic thought (Piaget, 1959).

In the preschematic stage the child begins to draw human figures. At first, these appear as tadpoles with a large circular head and lines for appendages. The child is able to state that this is a figure, and can delineate body parts that are not identifiable to the observer (Golomb, 1990). Parts of the artwork get named, thus giving identity to the work and letting the observer know that the drawing has meaning (Rubin, 1984). It is at this stage that an increased interest in art is developing, and this reflects the child's expanding interest in the world. The child is beginning to gain a sense of control, and this is reflected in his or her art (Rubin, 1984). Art at this stage is disordered, but the child has his or her own personal logic of object placement (Winner, 1982). Perseveration is common at this time, because young children like the consistency of repetition (Machover, 1980).

The schematic phase, occurring between the ages of seven and nine, is marked by the beginning of the use of baselines and grounding in drawings (Malchiodi, 1998b). This is the beginning of the concrete operations stage (Piaget, 1959), and the child is now able to draw with more realism. This is a time of rapid progression in which a child begins to show an understanding of depth and spatial relations (Lowenfield, 1947; Lowenfield & Brittain, 1982). Color begins to be used in a more precise and logical manner, and size is exaggerated based on the importance that figure takes in the child's life (Rubin, 1984). Omitting major parts of the drawing is common at this stage, and is not considered clinically noteworthy (Malchiodi, 1998b). Transparencies, where one can view objects that are normally hidden behind barriers, are common (Machover, 1980). This is because the child lacks the required amount of perspective to draw obscured objects properly and because children think concretely (Machover, 1980). In childhood, things are drawn as they are known to be, not as they are seen to be (Machover, 1980). The concrete thinking of the child at this age is reflected in the concrete manner in which he or she creates art.

From the ages of nine to eleven, the level of skill in spatial relations and color discrimination increases (Malchiodi, 1998b). Art takes on an increased rigidity as the child now rebels against earlier creativity and freedoms and wishes to draw in a more realistic manner (Malchiodi, 1998b; Willats, 1977). Children at this age are interested in the opinions of others (Erikson, 1980) and, as such, their artwork takes on more socially accepted perspectives. Green dogs and purple buses give way to depictions that are representative of real life. Many children at this stage become discouraged in their abilities to create realistic artwork and need to be encouraged to draw. If drawing

is not encouraged at this time, the art becomes stunted. This is why many drawings that have been done by adults look as though a ten year-old has created them (Malchiodi, 1998b). Children move away from art at this time because they no longer feel the need to express themselves in this manner. An increased vocabulary and verbal skills now allow the child to express him or herself more expertly in that modality, and a graphic depiction of his or her feelings is no longer necessary (Gardner, 1980).

The ages 11 to 13 are marked by increased detail and a continued critical awareness of ability (Malchiodi, 1998b). Adherence to realism continues, and human figures take on more realistic forms. The child begins to experiment more (Rubin, 1984), but this experimentation may be hampered by disappointment in the finished art product.

The period of adolescence brings with it increasingly detailed and sophisticated drawings, more like that of an adult. The adolescent artist is aware of color and style, and makes careful choices about the way he or she wishes to represent the world in his or her artwork (Malchiodi, 1998b). Few individuals reach the sophisticated stage of the adolescent artist, because they have been discouraged from creating art at earlier stages of development. Art at this stage is highly personal, and there is an awareness of self in design and shape (Rubin, 1994).

### *Symbolism and Interpretation of Art*

The interpretation of art via the evaluation of specific features was central to this study. While this study focused only on a few specific features, an overview of the main components of drawing interpretation is offered so that a global perspective

of symbolic meanings can be presented. In practice, as many symbols as possible are reviewed so that the assessor can get as much data as possible on the individual he or she is assessing.

Validity and reliability studies on the interpretation of art have fairly consistently been based on finding a connection between the presence of specific characteristics of the individual who has created the drawing, and correlating them to the presence of certain aspects of the drawing (Peterson & Hardin, 1997). As such, general guidelines of what to look for in artwork and the possible meanings behind the presence of certain indicators exist.

Many researchers have stated that the overall appearance of the drawing must be evaluated to determine the emotion the drawing is expressing (Peterson & Hardin, 1997). It is believed that this gives the observer a general perspective of the individual artist, and a window into the artist's overall emotional balance. By looking at the picture as a whole, the observer can take the scene into account, make some preliminary assumptions, and then test those assumptions out. Attention should be paid to the mood of the drawings, and the feelings the artist may have (Furth, 1988; Hulse, 1951; Peterson & Hardin, 1997).

### *Spacing*

Spacing is one aspect of drawings commonly referred to when discussing drawings, especially with drawings of families or groups of people. Various researchers have concluded that the closer figures are placed in a drawing, the more emotional closeness these figures share (Fury, et al, 1997; Holtz, et al, 1980; Hulse,



1952; Rabinowitz, 1991). Thus, closeness may reflect intimacy in real life, just as distance in a drawing may signify separateness.

Data from spacing provides the assessor information on sociability and the relationships of others in the artist's life. For example, human figures who are placed side by side in a drawing are thought to be coupled. This often happens when a child is asked to draw his or her family, and places his or her parents in a group. Likewise, sets of siblings who are placed in groupings are thought to be perceived as social schemas for the child who creates the drawing, thereby not necessarily showing emotional closeness, but an alleged sense of unity within the family (Holtz, et al, 1980).

Some criticism has arisen over the assumptions on spacing, with researchers concluding that the placement of figures in drawings has more to do with social mores and cultural values than emotional factors (Holtz, et al, 1987). Additional criticisms on spacing, as well as on other aspects of interpretation of drawings, include concerns that the evaluator may view the drawing with a tendency to project his or her own feelings and issues onto the drawing (Scribner & Handler, 1987). There was some initial thought that an assessor of a higher level of education would provide greater reliability and validity to drawing interpretation, but at least one study has found this not to be the case (Levenberg, 1975).

Spacing in drawings has been scored and evaluated in a variety of ways, but there is no agreement on which method is best. Burns and Kaufman (1972) used a grid-like overlay to measure spacing, while Rabinowitz (1991) measured distances between figures at their midpoints and McGregor (1978) measured the shortest

distance between figures using a metric ruler. In a related manner, Gehrig (1998), developed a mathematical procedure to determine distances between representational figures in his Family System Test. This system, which relies on ratios, eliminates issues such as relative distance from the edge of the viewing field, thus allowing each individual's idiosyncratic qualities to reveal themselves, without the need for among group comparisons. While Gehrig's work on evaluating distance is promising, it has not been adapted for use with the K-F-D.

#### *Encapsulation/Compartmentalization*

Two important considerations when evaluating drawings occur when one sees an encapsulation or a compartmentalization. Though similar, compartmentalization and encapsulation are two different features of drawings, and signify varying degrees of distancing from others. In encapsulation, the individual separates objects contained in the drawing by placing barriers completely around that object (Peterson & Hardin, 1997). For example, if a child is asked to draw a picture of his or her family the child may employ encapsulation by placing each family member in a separate room, or placing a fence around certain members of the family.

Compartmentalization also involves the placing of boundaries around objects (Furth, 1988), but the boundary is less clearly defined than encapsulation. In compartmentalization, the artist may draw objects apart from one another, but without a clear demarcation around the objects. Compartmentalization is also demonstrated in drawings in which each object or person is doing a different activity, and would therefore be unable to interact.

Both encapsulation and compartmentalization are thought to signify the artist's desire to set him or herself apart from others, and to alert the observer to the possible need for protection (Furth, 1988; Peterson & Hardin, 1997; Reynolds, 1978). Boundaries in these types of drawings become as important in the artwork as they do in real life. One who observes this style in drawings may question the fears of the artist, what he or she feels that he or she needs to be protected from, and what is happening in the life of the artist (Furth, 1988). Protecting and distancing are common themes in the lives of those who draw barriers, and the artist may be stating a need to set him or herself off or apart from others (Peterson & Hardin, 1997).

### *Transparencies*

There are times when an individual may draw a human figure where parts of the drawing appear to be transparent. This often happens in children's drawings when the child draws a body and then places the clothing "on top" of the body, or when one can see inside a house where the outside walls are in view. In this way, one sees through a barrier and the drawing appears as an "x-ray" of what lies beneath. Referred to as transparencies, these types of drawings are believed to be drawn by individuals who have issues related to privacy (Peterson & Hardin, 1997), and who may be signaling to the observer that he or she is peering into an area that is highly secretive (Furth, 1988). Individuals who draw several layers of transparencies in which the observer can see, for example, through a house, then through clothing, then through the body are considered to be a sign of poor reality testing, and may also signify denial (Furth, 1988).

Transparencies are fairly common in the drawings of younger children and are not considered significant unless drawn by an individual past the age of nine (Malchiodi, 1998b) when more realistic drawing begins to take place. Adults and adolescents are not known to draw transparencies on a frequent basis, and when this occurs it should be noted (Furth, 1988).

### *Color*

Color in drawings theoretically denotes emotion (Hammer, 1980; Irwin, 1991). Specific color selection is an aspect of drawings that has drawn much attention regarding its meaning, but on which there is little agreement. The general consensus is to view the use of color in the context of the drawing (Furth, 1988; Rubin, 1984). Color can have a different significance dependent upon many factors, and it is for this reason that the use of color must be carefully evaluated and assessed within the global outlook of the artwork. For example, when red is used as a component of a Valentine heart, it has a vastly different significance than when red is used as a part of a drawing of a bloody scene, or in a picture of a dead body. If the color makes sense in the drawing, and is a developmentally appropriate choice for the artist who selected it, it is probably not noteworthy. Color tends to be a less important consideration in drawings where the details of that drawing take precedence over color (Golomb, 1990). When looking at color use in drawings, one should consider how and where the color is used, the quantity of the color, and how intense it appears to be (Furth, 1988).

Researchers have noted that color choice often is a function of development. As a child grows, he or she becomes more aware of the dimension of color. A child is unaware of color choices until after the age of four. Between the ages of four and six

color selections are made, but they are made without rationale. By age six, rules for color selection begin to be observed, and the rules are firmly in place by the time the child reaches nine (Malchioldi, 1998b). Thus, an observer may look at color selection with the knowledge of how and when these choices develop, and make assessments accordingly.

Empirical data has shown that younger children (under five) tend to be attracted to and pick colors that are warmer, like reds and oranges, whereas older children are attracted to cooler colors such as blues and greens (Alschuler & Hattwick, 1947). Hammer (1980) has noted that this pattern continues into developmental patterns in adults. More impulsive individuals, a trait common in young children, tend to choose colors such as reds and yellows. Individuals who choose cooler colors, such as blues or greens, tend to be more controlled and careful in their work. An additional consideration about the selection of colors for very young children is the fact that they are noted to select colors more by the way they are placed in front of the child than by a personal preference (Corcoran, 1954). Thus, color selection becomes one of convenience rather than fondness.

Culture and familial affiliations are also important components of color choice, and should be considered when evaluating drawings. Wadeson (1980) has noted that members of the same family exhibit a preference for certain colors and this is borne out in their drawings. Members of the same culture also exhibit color preferences, and culture should not be discounted when assessing the possible meaning behind color choice (Malchiodi, 1998a).

Consideration has been given to whether physical illness affects color selection with many researchers concluding that physical maladies can be reflected not only in artwork, but in color selection as well (Furth, 1988; Malchiodi, 1998a). Likewise, depression may be expressed in a drawing if there is less color, or if the drawing is monochromatic past the time when it is developmentally appropriate to express oneself this way (Malchiodi, 1998a; Wadeson, 1980). Thus, the observer may be able to key into issues related to both physical and mental health merely by looking at the drawings of that individual.

The meaning associated with specific color selection is a controversial topic. Some general considerations can be given, but it is vital that color be thought of as one aspect of the drawing and that the meaning behind the color be evaluated within context. Color denotes emotion, and can be commonly evaluated as follows:

Red: anger, passion, love, warmth (Malchiodi, 1998a). Red may also signify an issue of psychological importance (Furth, 1988), or an area associated with deep emotion (Peterson & Hardin, 1997);

Blue: spirituality, nourishing, calm (Malchiodi, 1998a), health (Furth, 1988), energy (Peterson & Hardin, 1997);

Orange: assertiveness, power, energy (Malchiodi, 1998a), suspense, struggle (Furth, 1988);

Green: fertility, renewal, creativity (Malchiodi, 1998a), growth (Bertoia & Allan, 1988; Furth, 1988);

Purple: royalty, death, imagination (Malchiodi, 1998a), supreme power, a need to control (Furth, 1988; Peterson & Hardin, 1997);

Yellow: warmth, expectation, hope (Malchiodi, 1998a), energy (Furth, 1988), something of great value (Peterson & Hardin, 1997);

Black: darkness, emptiness, depression (Malchiodi, 1998a), the unknown (Furth, 1988), fear, threats (Peterson & Hardin, 1997);

White: purity, virginity, dreamlike, generativity (Malchiodi, 1998a), repressed feelings (Furth, 1988; Peterson & Hardin, 1997).

### *Size*

The aspect of size in drawings is theorized to be the least conscious form of projection in drawings (Machover, 1980). This includes both the overall size of the objects or figures in the drawings, and the size of the individual components of the drawings.

The overall size of the figures or objects in drawings is believed to reflect power or worth (Cox, 1993; Furth, 1988; Lowenfield, 1939; Malchiodi, 1998a; Spigelman, Spigelman, & Englessen, 1992). Smaller figures are believed to indicate feelings related to lack of worth, insecurity (Klepsch, Logic, & Logie, 1982; Koppitz, 1968; Machover, 1980; Osler & Gould, 1987), and regression (Machover, 1980), whereas larger figures or objects are believed to denote grandeur or importance (Machover, 1980). This point on the overall size of drawings has become a general rule when evaluating drawings, mainly because there is a large consensus on this aspect of drawings. However, a closer look is necessary to discuss some of the finer points on size.

When one area of the drawing is out of proportion with the rest of the drawing, it is believed that this signifies a problem area (Furth, 1988). For example, individuals

who draw figures with large heads are thought to have issues surrounding their beliefs about their own intellectual capacities (Klepsch, et al, 1982; Machover, 1980). Large hands may also represent aggressiveness and poor impulse control (Koppitz, 1968; Osler & Gould, 1987; Peterson, et al, 1994), whereas small hands are believed to indicate helplessness (Klepsch et al, 1982).

When looking at the components of a figure drawing, it is important to consider what that body part means to the functioning of the person. Hands are a major part of the way we control our environment and the representations of hands in drawings are believed to reflect these same issues. Feet, our way of securely grounding ourselves to our world, reflect this in drawings. Small feet are hypothesized to indicate dependency and an inability to stand on one's own, while large feet show a need for security and groundedness (Klepsch, et al, 1982). Large ears are indicative of paranoia and a fear that people are talking about the artist (Klepsch, et al, 1982). Stick figures, a normal variant drawn by young children, may reveal that the individual is reluctant to reveal personal information (Klepsch, et al, 1982).

In general, the greater the size differential or the overall size of the figure, the more intense the feelings related to that area of the body or figure are believed to be (Landgarten, 1981). As the size increases, so do the feelings that accompany that object.

Development and gender are important considerations when evaluating size in drawings. Young children, who have not learned the phenomenon of perspective, draw the figures who are important to them larger than the figures who are less



important (Rubin, 1984). Thus, the observer gets a quick glance into the world of the child, and is able to assess who is the focus of that child's life.

Goodenough (1928) conducted a study that, in part, evaluated gender differences in drawings. She discovered that females tended to draw both figures and body parts smaller than their age-matched male counterparts. This study led to the hypothesis that gender may play a role in how one depicts figures with regard to size, and this factor should be considered in assessing drawings.

#### *Underlining/Shading*

Shading in drawings is demonstrated when individuals underscore or reinforce certain areas of the drawing. Shading is frequently attributed to anxiety or stress (Klepsch, et al, 1982; Furth, 1988; Irwin, 1991; Peterson & Hardin, 1997). Shading of a particular area parallels an area in the artist's real world that may cause stress. Further, the heaviness with which the artist shades is believed to mirror the level of intensity of his or her anxiety about that area (Furth, 1981; Furth, 1988). For example, shading of the face is said to represent shame, depression, and embarrassment (Koppitz, 1968; Osler & Gould, 1987; Peterson, Nitsch & Higgins, 1994). In individuals who heavily shade the face, the feelings of shame are thought to be more severe than in individuals who shade the face less.

Baselining a drawing, in which the artist emphasizes the ground by placing a line under the objects or figures drawn, suggests a need for security or a lack of grounding in life (Furth, 1988; Klepsch, et al, 1982). Placing the same line above, rather than below the figures or objects, indicates fear, or a burden that the individual

is carrying and is unable to eliminate from his or her life (Furth, 1988; Peterson & Hardin, 1997).

Machover (1980) contended that the heaviness of the baseline or topline is just as important as the location of the line. She suggested that heavy underlining shows a form of pathology on the part of the artist, most frequently schizophrenia. In addition, she found that those who draw faint lines tend to be socially timid and shy.

### *Positioning*

Where the artist places objects on the paper and how the objects are placed on the paper can be a feature by which to assess the drawing. Looking at the drawing as a whole can give an indication of an artist's tendency to cluster figures together, and possibly crowd one side of the paper over the other. Additionally, folding the paper into quadrants or halves can show where emphasis in placement has occurred.

Figures that slant indicate insecurity (Klepsch, et al, 1982; Koppitz, 1968; Peterson, et al, 1994). If one imagines a body that slants, it is easy to see how that figure would be out of balance and need stability. Additionally, a need for security may be suggested when an individual places the bulk of the drawing towards the bottom of the page (Klepsch, et al, 1982).

Floating objects or figures that are not grounded may portend feelings of a loss of control (Bussard & Kleinman, 1991; Peterson & Hardin, 1997). Floating objects are similar to slanting ones, but the feelings associated with it are more intense because there is less control and no grounding at all. Hanging objects, ones that are suspended in the drawing without any form of anchoring, are even more severe

indicators of lack of control. Hanging objects may reveal fear on the part of the artist (Peterson & Hardin, 1997).

When an individual places objects on the edge of a drawing, as if the drawing were to be continued on another page, a lack of commitment to the drawing is suggested, as is a reluctance to reveal portions of the self (Furth, 1988). This also uncovers the feeling the artist is overwhelmed, needs support, and lacks self-assurance (Bussard & Kleinman, 1991; Hammer, 1980). This individual discloses only parts of him or herself and keeps the rest hidden from view. Thus, his or her drawing will only expose portions of the self, with the rest left up to question. However, participation in the drawing process signifies at least a partial commitment to growth and exploration (Furth, 1988).

Drawings that are centered on the page are believed to be made by individuals who are centered and in control (Aschuler & Hattwick, 1947). These individuals are believed to be self-directed and highly secure and are contrasted with those who draw off-center who are thought to be uncontrolled and dependent (Wolff, 1946).

Drawings that are mostly on the left portion of the paper are interpreted to be made by individuals who are self-oriented (Machover, 1980), impulsive (Jolles, 1971) and seek out immediate gratification (Hammer, 1980). The left side of the paper is regarded to reflect regression (Jolles, 1971; Klepsch, et al, 1982), and is therefore linked to time. Additionally, the left side of the paper is considered to be more closely tied with the unconscious than the right side of the paper, which is more indicative of conscious thought and expression (Jolles, 1971).

Those who emphasize the right side of the page are hypothesized to be stable, in control, and willing to delay gratification needs (Hammer, 1980). Additionally, these are individuals who are intellectually oriented but who suffer from inhibition in social situations (Buck, 1948).

Research done on the vertical placement of figures or objects on the page is contradictory. Some conclude that the bottom of the paper points to security and is frequently used by individuals who are firmly rooted in reality and like structure (Jolles, 1971), while others believe this indicates insecurity, inadequacy, and a depressed mood (Buck, 1948; Levy, 1958). Jolles (1971) contended that individuals who contain their artwork mostly on the top half of the paper are aloof and inaccessible to others, while others argue that the top of the page is evidence that the artist is striving hard to attain goals and is attempting to seek satisfaction in fantasy (Hammer, 1980).

These conflicting messages are left for the evaluator to interpret dependent upon his or her training, which is based on theoretical point of view.

### *Omissions*

Omissions in drawings attest to a repression or denial of that figure or object (Furth, 1988; Handler & Habenicht, 1994; Peterson & Hardin, 1997). Conflict, as well as psychological and physical absence, is expressed through omission (Peterson & Hardin, 1997). Where omission occurs is often quite revealing, and this is an area that may be a focal point when evaluating drawings. For example, feet that are omitted are believed to be connected with feelings of insecurity (Klepsch, et al, 1982). Lack of hands may reflect powerlessness, and omitting legs suggests incapacitation (Peterson

& Hardin, 1997) and immobility (Bertoia & Allan, 1988). Incomplete figures and figures with missing genitalia may be drawn when there is sexual abuse (Kelley, 1984; Cohen & Phelps, 1985; Malchiodi, 1997; Peterson & Hardin, 1997).

As with other aspects of drawing, gender and development impact how and when omissions occur in drawings. Children under the age of seven frequently omit parts, and this is considered to be a normal part of the development of artistic skill (Peterson & Hardin, 1997). In addition, males tend to omit more things from their drawings and be less detail oriented in drawings than females (Peterson & Hardin, 1997). Therefore, one is cautioned to take these factors into consideration when assessing drawings.

### *Considerations for Special Populations*

When assessing drawings it is important to consider the environmental and psychological context of the individual artist. Special populations have been studied to determine the value of the use of drawings, both as a therapeutic and diagnostic intervention. One purpose of this study was to underscore the utility of drawings in assessment. This section is provided to enhance understanding of the wide use of drawings in the helping professions, especially the use with targeted populations.

### *Families*

Studies evaluating family drawings have been conducted since the 1930's (Malchiodi, 1998b). It has been posited that family drawings may disclose an abundance of information not only about the individual who draws the picture, but about the interpersonal dynamics between the individuals depicted as well (Burns & Kaufman, 1972; Hulse, 1951).

Early researchers instructed their subjects to draw a family (Hammer, 1980).

These studies looked at size and omissions as major components of interest, and the researchers were especially interested in the way children, rather than adults, portrayed their families (Hammer, 1980). No one person is credited with devising this method of analyzing drawings but the method gained rapid popularity only to be overshadowed by the Kinetic Family Drawing test which was developed in the early 1970's (Hammer, 1980; Malchiodi, 1998b).

The Kinetic Family Drawing, K-F-D, (Burns & Kaufman, 1972) asks the subject to draw a picture of his or her family doing something. It was hypothesized that by giving the subject the directive of placing action into the drawing, more information about interpersonal dynamics would be shown in the artwork. The K-F-D is evaluated by examining the style or organization of the drawing, the content of the drawing, the physical characteristics of the people depicted in the drawing, and spacing between figures (Handler & Habenicht, 1994). Action in the drawing is reviewed, as are distances and barriers, and positioning (Burns, 1982). Through the K-F-D, the assessor obtains information about the family and their relationships to one another, as the artist perceives them (Hammer, 1997).

Burns (1982) stressed the importance of evaluating the individual's style when using the K-F-D and delineated eight components of style that he perceived as indicators of family pathology. These are: compartmentalization, placing figures on the perimeter of the paper, encapsulation, folding the paper and placing the figures within the folded quadrants, lining the bottom of the drawing, lining the top of the

drawing, underlining each figure, and drawing a family with a bird's eye view perspective (Burns, 1982).

Symbolism found in K-F-D's closely resembles the symbolism that is found in other drawings, and the interpretations of the material are similar (Holtz, et al., 1980; Rabinowitz, 1991; Sims, 1974). Information on spacing is believed to indicate closeness, as is the amount of time spent on drawing each individual, with the artist spending more time drawing those emotionally closest to him or her (Hulse, 1951). Omissions may occur because of issues with that family member. For example, children who leave siblings out of drawings may feel rivalry or inadequacy in relation to that brother or sister (Hammer, 1980). Sibling omissions tend to be same-gendered, and researchers are unclear as to whether this occurs because of increased rivalry between same-gendered siblings (Leung & Robson, 1991; Mander, 1991; Minnett, Lowe Vandell, & Santrock, 1983) or whether this can be attributed to male versus female differences in drawing styles (Spigelman, et al, 1992). Regardless of cause, those who analyze family drawings (Peterson & Hardin, 1997) consider omissions a significant marker.

Size may indicate who is important in the family, or who wields the most power (Hammer, 1980). A child may draw his or her much younger sibling the same size as himself or herself because of feelings that the younger child is more powerful, or because the older child feels a sense of competition for a parent's love (Hammer, 1980). A mother who is actually diminutive may be drawn larger than a father because the role she plays in the family is greater. A tiny figure may reveal that the person depicted is not perceived as important by others (Furth, 1988; Hammer, 1980).

Initial hypotheses assumed that the artist would draw the family member perceived most important first, and then complete the picture by filling in the rest of the family (Spigelman, et al., 1992). Recent research has not supported this notion, and has found that family drawings are typically constructed by placing a family member of the same gender first, with the other family members drawn in a non-discriminant sequence (Spigelman, et al., 1992).

Family crises may be depicted in family drawings. Research has shown that children from divorced homes draw significantly depressed scenes, omit hands and feet more often than controls (Spigelman, et al., 1992), heavily shade their pictures, and utilize encapsulation frequently (Handler & Habenicht, 1994). Thus, the assessor is able to get a view into the family system, and the emotional aspects of their life, merely by examining the drawing.

Developmentally, drawing ability occurs along a continuum (Malchiodi, 1998b). Latency age children, for example, occasionally draw themselves taller than their parents, regardless of the actual size of these family members. In addition, younger children depict themselves interacting more with their families than do children past the age of nine (Handler & Habenicht, 1994). Normally these would be symbols of note, but may be discounted when the age of the artist is taken into account.

Culturally, family drawings reflect the mores of the society of the person that draws. For example, those of Asian descent frequently include extended family members in their drawings (Handler & Habenicht, 1994), and African-American individuals tend to draw the mother figure larger than the father in most drawings



(Deren, 1975). Assessing drawings without knowledge of the individual's culture can lead to misleading conclusions. Therefore, understanding how the dynamics of one's culture impacts drawings is essential for proper interpretation.

Expressive techniques with families that involve drawing and are not necessarily projective can aid the clinician who wishes to assess families. Art therapy techniques are easily implemented with families, and can reveal a large amount of information about the family. Many art therapists choose to ask the family to create a project as a unit, and then observe how the family interacts (Denny, 1972; Ford Sori, 1995; Landgarten, 1987). Family roles, alliances, triangles, and coalitions are often revealed through this process, and can provide the therapist with information to explore in future sessions.

Another technique is to have each family member draw the person he or she feels most strongly about (Landgarten, 1981), or to draw the family member who is the target of his or her most intense feelings (Rubin, 1984). This exercise may facilitate communication among family members, and allows the clinician to gain insight into the family's values and their attitudes towards one another.

Additional techniques that can be employed with families include: asking family members to communicate through drawings that are passed back and forth between them, passing an incomplete drawing around in a circle and asking each family member to do a portion of the picture (Denny, 1972), making abstract drawings of the familial relationships (Wadeson, 1980), or asking the family to discuss feelings related to observing a famous work of art (Johnson, 1992). These types of techniques can be projective, and can be utilized at any point in treatment.

The therapist has many options when choosing to implement art in treatment, and how one puts art into practice in session depends on one's training, theoretical orientation, and the rationale for using art in treatment.

### *Mental Illness*

Historically, the study of art and mental illness has been intrinsically linked. Researchers long ago discovered that mental illness could be assuaged through the creativity that is channeled into art (Prinzhorn, 1972), and many have documented the value of using art as a means of treating the mentally ill (Landgarten, 1981; MacGregor, 1989; Wadeson, 1980). Both Freud and Jung noted the value of using art in therapy, and both believed that art was tied to the unconscious (Jung, 1956; Malchiodi, 1998a).

Throughout time, there has been an association between madness, creativity, and art (Malchiodi, 1998a). Famous artists such as Vincent van Gogh have fueled the idea that artists are eccentric, suffer from mental illness, and that it is this eccentricity which drives creativity. One only needs to view van Gogh's work to see that many of his paintings reflect a turmoil that he was likely feeling within.

Projective tests that utilize visual components as an integral part of the evaluative procedure, such as the Rorschach, strive to reveal pathology in the test taker (Exner, 1993). As such, it is suggested that responses to visual stimuli can reveal aspects of one's personality that are connected with mental illness and deep-rooted emotional difficulties.

Art has been reviewed and categorized by data that reveals information about the artist. In general, there is much variability in art, and care must be taken not to

over-emphasize any one area of the piece in order to diagnose or label an artist. However, some generalizations are available that have associated specific aspects of artwork to certain populations. For example, Wadeson and Carpenter (1976) have found that people with depression tend to use less color and have more empty space in their drawings than individuals without depression. Similarly, people with mania use more color than those without this diagnosis, and those with diagnosed schizophrenia tend to vacillate between colorful, organized work and work devoid of color and organization dependent upon the degree of their symptomology at the time of creation (Wadeson & Carpenter, 1976).

Suicidal patients who do not easily express their concerns may reveal their feelings through the use of art and drawings (Wadeson, 1980). Drawings of these patients often reflect their negative feelings towards themselves, and also their feelings towards others. In general, the art of suicidal clients mirrors that of clinically depressed clients. Art of this type reflects rage, and is characterized by a limited use of color, heavy use of empty space, disorganization, and a sense that the picture lacks completeness (Wadeson, 1980).

Landgarten (1981) hypothesized that the art of the mentally ill appears somewhat uniform because it is derived from primary process material that may be chaotic and disorganized. Art by these individuals, she asserted, is bizarre, isolative, disorganized, fragmented, and fraught with such inconsistencies as irrational placement of items on the page, the placement of unrelated items in a group, and the use of bold colors in inappropriate areas (Landgarten, 1981). Additionally, there is a tendency, especially among schizophrenics, to depict the human brain, or brain matter,

in drawings (Wadeson, 1980). Body images are also distorted, presumably because of a loss of the sense of self (Landgarten, 1981).

The use of art in treatment can be easily implemented with a mentally ill population. Many art therapists have found that clinical exercises that include art allow those who are suffering from emotional difficulties to deal with their issues, and allow some healing to occur. Art in psychiatric settings has proven to be a valuable piece of the therapeutic milieu, and helps to create an atmosphere conducive to the enhancement of discussions of treatment concerns. Some examples of using art in the treatment of the mentally ill are: asking the client to draw his or her own feelings (Denny, 1972; Landgarten, 1981; Malchioldi, 1998b), draw a fear, or draw a favorite memory (Landgarten, 1981).

Often, a clinician may ask a client to draw or create something of the client's own choice (Malchiodi, 1998a). This type of spontaneous exercise may elicit information about the client's well-being, and also about how under-controlled that person is feeling. For example, Landgarten (1987) has noted that art materials give a view to feelings related to control and rigidity. She developed a continuum of art media from least-controlled (wet clay, watercolors, soft plasticine, oil pastels, thick markers) to most-controlled (collage, hard plasticine, thin markers, colored pencils, lead pencils) and postulated about the reflection of choice of materials may have for the individual making this type of selection.

### *Sexual Abuse*

Sexual abuse is an issue that has gained attention in recent years. No longer a phenomenon that is dealt with quietly within families or never addressed, knowledge

about sexual abuse and the treatment of its victims now comprises a portion of all individuals who seek out mental health treatment (Courtois, 1996). Not surprisingly, art fits into the rubric of both diagnosis and treatment of this problem.

Many of those who experienced sexual abuse have a difficult time discussing or even recognizing the issue. As a result, verbal communication about such matters will often reveal almost no data. Art, a medium that relies on non-verbal communication and stems from the unconscious, is an excellent vehicle through which to channel the difficult emotions associated with sexual abuse for both children and adults (Malchiodi, 1998b; Matto, 1998). Art can also be used to reveal information on body image by having clients draw what they perceive they look like to others (Denny, 1972; Landgarten, 1981; Wadeson, 1980). In this manner, the issue of body image, an issue that is often linked to those suffering from the trauma that accompanies sexual abuse, can be assessed and addressed indirectly by the clinician through the use of art.

Researchers have found that children who have been sexually abused will often over-emphasize, de-emphasize, or omit genitalia in drawings (Peterson & Hardin, 1997). Developmentally, there is the belief that children do not consider the genital region important in their world, so this area does not appear regularly in their drawings (Malchiodi, 1997). Therefore, the mere inclusion of genitalia in young children's drawings is considered to be a potential marker for sexual abuse (Faller, 1988; Hibbard, Roughmann, & Hoekelman, 1987; Kelley, 1984; Yates, Buetler, & Crago, 1985).

Additional considerations in the evaluation for sexual abuse in drawings include data from anecdotal research such as: drawing an individual with an elongated

tongue or with sexy attire (Drachnik, 1994), drawing just a head or an otherwise incomplete body image (Cohen & Phelps, 1985; Kelley, 1984; Malchiodi, 1997), scenes of poor family relationships (Hackbarth, et al, 1991), the presence of beds (Handler & Habenicht, 1994), having a drawing where only the upper body was emphasized (Kelley, 1984), the omission of the central part of a figure (Jolles, 1971; Peterson & Hardin, 1997), tiny figures (Osler & Gould, 1987), the inclusion of a navel (Peterson & Hardin, 1997), jagged teeth (Osler & Gould, 1987), a poor integration of body parts, the use of transparencies, large hands, and the inclusion of rainbows, hearts or butterflies into the drawing (Peterson & Hardin, 1997).

Milton Peterson conducted a study from 1989 through 1990 that compared those who had experienced some form of sexual abuse with those who had not, and refined the list of sexual abuse markers in drawings to a select, core group of indicators (Peterson & Hardin, 1997). These indicators appeared more markedly in the drawings of sexual abuse victims, and have been labeled by Peterson as the "serious seven." They are: the explicit drawing of genitalia, the concealment of genitals, the omission of the genital region, omission of the central part of the figure, encapsulation, the addition of fruit trees, and drawing of the opposite gender (Peterson & Hardin, 1997). Peterson does not explain why over-emphasizing, omitting, and concealing genitals (the only three options there seem to be regarding drawing genitals) are all listed as markers. This presents a perplexing dilemma for those wishing to use his criteria as a diagnostic method for using drawings to reveal sexual abuse, and brings his research into question.

The prevalence of sexual messages in today's media has increased children's awareness of these issues. There is a concern that children, in today's society, are exposed to too many messages about sex at an early age. The impact of this is currently unknown but there is some concern that sexual messages are appearing in children's art at heightened levels (Malchiodi, 1998b). As such, clinicians are cautioned not to over-interpret sexual images in children's art but rather, to be aware of the environmental cues and social mores that surround that child.

### *Grief and Loss*

Throughout the course of one's life, there are multiple occasions where loss is encountered. Loss is traditionally thought of as occurring after a death, but loss takes on many forms. Loss occurs after the loss of dreams, the loss of a promise for the future, and the loss of a significant part of one's life.

Often, those who have undergone a loss find it difficult to discuss feelings related to the void that has been created by the absence of someone or something. Art, an expressive but non-verbal medium, often fills this void by providing an outlet from which to express the emotions that have been left unsaid. Researchers have found that art aids those who are undergoing divorce (Segal, 1984), terminal illness (Bertoia & Allan, 1988; Bussard & Kleinman, 1991; Furth, 1981; Irwin, 1991; Mango, 1992; McIntyre, 1988), the loss of a loved one (Zambelli, Clark, Barile, & deJong, 1988; Riley, 1990), and other catastrophic events (Landgarten, 1991) by providing a venue from which to gain control and direct emotions (Segal, 1984).

Bereavement manifests itself in art in a variety of ways, but is recognizable to the trained observer through symbols and other representations of grief and feelings

associated with loss. For example, a grieving individual may draw a house on the verge of collapse to signify his or her own feelings about the status of their family or social life during illness or at the time of death (Mango, 1992). Pictures or drawings that creep out towards the edge of the paper are thought to mean that the person is either aware of some kind of impending emotionality (Furth, 1981), or that the artist is overwhelmed by his or her feelings (Bussard & Kleinman, 1991).

Researchers who have examined a number of drawings done by individuals suffering from terminal illness have noted that these drawings tend to be filled with images of promise and rebirth (Furth, 1981; Mango, 1992). Birds with nests that are filled with eggs (Mango, 1992), rainbows (Furth, 1981), and green, growing grass (Bertoia & Allan, 1988) are three classic examples of this. Cancer patients often fill their artwork with circles in a manner which seems to demonstrate a desire to be whole again (Mango, 1992). The idea is that the suffering individual is able to put on paper promises to the self that he or she can either not recognize, or not verbalize to others. These symbols may indicate thoughts about wellness or reincarnation, but are believed to be cathartic in nature.

Often, themes of decay and depression appear in drawings done by those who are dealing with illness and loss. Depictions of rotting trees to represent the decaying of the body are common (Mango, 1992), as are scenes of couches without arms to signify a lack of support (Furth, 1981). The omission of arms and legs to show how powerless one feels also regularly appear in the drawings of the terminally ill, and are shown in those who have undergone loss and difficult life transitions (Bertoia & Allan, 1988).



In children's drawings, illness is often portrayed by either an over-exaggeration or omission of the body part that has been impacted (Uhlir, 1979). For instance, a child with cystic fibrosis may draw a figure with an enlarged chest area, or with a black hole where the chest should be. This occurs because the drawing is a reflection of the child's body image, and the art reflects not only the psychological concerns of the child, but the somatic issues as well (Bach, 1975; Furth, 1981).

Color used in the drawings of the physically ill also gives the observer cues about what that person may be feeling. Intensity of color reflects intensity of feeling, and the deeper the hue of the color the more impacted the individual is suspected of being. The one exception to this rule appears to be green, wherein darker greens are thought to signify health and continued growth (Bach, 1990). Ill children tend to choose black and red more often than healthy children, possibly because of their anger and depression over their disease (Perkins, 1977).

There is some evidence that artwork can be predictive, and this has been more extensively studied with a grieving population than with those who are not experiencing difficulties due to a loss. Symbols may appear in a quantity that predicts future events, or may appear on the edge of the paper to signify things to come (Furth, 1981; Mango, 1992).

When attempting to view art done by those who are ill or grieving, it is important to take all contextual factors into account. In addition, children's art will differ significantly from adult's art. Considering development, gender, culture, and the family life of the artist can enhance understanding of the symbols in the art, as well as open up avenues of discussion in treatment. Additionally, a variety of art activities

can help with the expression of feelings related to the loss. Some ideas for clinicians include: using hand-made puppets, creating a collage by pasting photographs of a loved one together, asking the client to draw peace and then contrasting that with a depiction of death (Segal, 1984), having the client draw his or her favorite memory of the past, and having the client draw him or herself throughout his or her lifespan (Landgarten, 1981).

### *The Use of Projectives in Family Therapy*

Reviewing the other projective methods used in family therapy provides an overall perspective of the value of uncovering unconscious processes in treating families.

The use of projective techniques to evaluate family dynamics is something that has been minimally explored. Family therapists continue to rely on verbal and observational techniques to uncover data about the family, and utilize self-report as a means of exploration.

Perhaps the most well known projective techniques in use with families are family choreography and family sculpting. While similar, choreography uses action to convey family dynamics and sculpting focuses on static representations of family relationships (Sherman & Fredman, 1986).

Family sculptures create visual, symbolic representations of the family system (Hernandez, 1998). A family sculpture is created when the family organizes themselves in space to represent feelings of closeness, distress, and distance. Typically there is one sculptor who organizes the family by his or her perceptions.

The technique is nonverbal, and is thought to be especially beneficial for families during times of turmoil (Hernandez, 1998).

Peggy Papp popularized the family choreography technique, which demonstrates how family dynamics can be portrayed through the physical placement of family members in space (Papp, 1976). In family choreography, the family members place themselves in a manner that reflects how well they interact with one another and then the family members "act out" their dynamics. By doing this, Papp contended that she can get a view of the family's relationships to one another, and gained valuable information for use in treatment. Family choreography differs from family sculpting in that it uses action to convey the intent of the individual and/or family (Sherman & Fredman, 1986).

Research has shown how guided imagery can aid in the unveiling of Bowenian dynamics in families. Clinicians have used guided imagery, in a group settings, to aid family members to specifically identify issues related to differentiation (Pare & Shannon-Brady, 1996). This technique asks that family members visualize the home environment for the purpose of eliciting information that the client may not be overtly aware of (Pare & Shannon-Brady, 1996).

### *Conclusion*

Drawings have been used by mental health professionals as a way of accessing personal information for over a century. In early times, drawings were used as a means of uncovering the unconscious, but were not overtly utilized as a mechanism for change. As empirical evidence on the importance of drawings arose, so too did their use in practice for assessment and intervention.

Projective tests such as the Rorschach, the Draw-A-Person Test, and the Kinetic Family Drawing revolutionized the field of psychology by bringing new and important ways to measure not only personality, but interpersonal dynamics as well, by the trained clinician. Their continued, if sometimes controversial, use in the field stands as a testament to their usefulness.

As the field of psychology evolves, and as the arena of art therapy grows, drawings are likely to become an ever-increasing part of the therapeutic milieu (Malchiodi, 1997). Systems theory has only recently begun to embrace the aspect of using art as a treatment modality and/or means of assessment. The use of art as a means of accessing data vital to systemic assessment is only beginning to be realized. Future research is needed to allow therapists to expand their knowledge on this valuable asset, and to provide additional empirical evidence of its worth.

### Chapter III

#### Methodology and Procedures

##### *Introduction*

This chapter will describe the method by which data was gathered, the instrumentation that was used, the statistical design, power analysis, and a description of the study participants.

##### *Participants*

Participants in this study were undergraduate students at a northeastern university who were at least 18 years-old. Demographic information was obtained and descriptively analyzed. Demographic data included: age, gender, ethnic background, marital status, number of people in the participant's family during childhood, and annual income. For the purposes of this study childhood was defined as the time before the participant reached 18 years-old.

All participation was voluntary. As an incentive, and at the discretion of the class instructor, participants may have been given extra class credit for involvement in the study. All participants received an informed consent in the study packet (see Appendix D) and were offered a summary of the group results, if desired, upon completion of the study.

##### *Procedure*

The researcher obtained permission from undergraduate university professors, and solicited study participants in-person from undergraduate classes. A brief description of the purpose of the study was given (i.e. to evaluate family dynamics),

and all interested class members were given a packet containing the study materials. Each participant indicated election to participate through the return of his or her completed study materials. Study packets consisted of all study instruments, informed consent, the demographic questionnaire, an 8 1/2" X 11" sheet of unlined white paper, a #2 pencil, and a return envelope. All study materials were coded to ensure confidentiality, and to protect the study from researcher bias.

The participants were instructed to place all of the completed study materials in the envelope that was provided, and to return the packets to an assigned location on campus, or return them directly to the researcher who returned to the class in one week's time. A master list was provided so that each study participant could record his or her name to ensure credit was given for participation in the study. In addition, each participant who wished to obtain a copy of the summary of results was provided an opportunity to indicate this on the master list. There was an area on the master list where the participant could provide his or her e-mail or other address for the summary of results to be sent if desired. Participants were given an in-class reminder about the study after two weeks had passed. If not enough participants were gathered, the procedure would have been repeated using different classes after two weeks had elapsed.

### *Instrumentation*

Two instruments, along with data garnered from the demographic questionnaire, were gathered from the study participants.

### *Family Drawing*

Each participant was instructed to complete a family drawing using only the materials provided in the test packet. Each participant was instructed to draw a picture of his or her family-of-origin (defined as the family they spent the most time with while growing up), and it was specified that every member of that family should be included. Directions for drawing the picture followed the protocol set forth by Burns and Kaufman (1970): "Draw a picture of everyone in your family, including you, doing something. Try to draw whole people, not cartoons or stick people. Remember, make everyone doing something- some kind of action" (pp.19-20). No other instructions were given, and each participant was free to use his or her judgment about page orientation, type of action, and size of the figures.

All drawings were evaluated and scored according to the presence or absence of encapsulation/compartmentalization, the presence of barriers, and the presence of overlapping, crowded, and/or touching figures in the drawing.

Encapsulation/compartmentalization was considered as one phenomenon, and, for the purposes of this study, was defined as set forth by Peterson and Hardin (1997):

Encapsulation: This is scored when drawn lines, objects or walls completely enclose one or more individuals, separating them from the rest of the family. The lines must be incorporated within the drawing to be scored as encapsulation (p. 76).

Lines are considered to be incorporated in the drawing if they are a part of the overall picture of that drawing.

**Compartmentalization:** This is scored when one or more family members are isolated from each other with lines, objects or walls that extend to (or close to) the edges of the paper (Peterson & Hardin, 1997; p. 76).

Touching, overlapping, and crowded figures were considered as one phenomenon. Spacing was determined by the presence or absence of touching or overlapping figures, as adapted from a checklist set forth by Fury, Carlson, and Stroufe (1997). Touching and overlapping figures were noted when present, and crowded figures were noted as present when any figure or figures intersected when a grid was placed over the drawing and a line from that grid intersected any two figures.

Barriers were defined as set forth by Peterson and Hardin in their 1997 research:

**Barrier:** This is scored when the child draws an object that provides an impediment between figures. The barrier may be realistic (e.g., a wall) or fanciful (e.g., a large flower) (p. 100).

Two individuals, who had been recruited and trained to score the drawings by the researcher in accordance with the study criteria, scored each drawing (see scoring manual Appendix A). Training took place prior to the study, and again at two-week intervals during data collection to ensure that accurate scoring criteria continued to be met, and that the raters adhered to the parameters of the study. The training was done to ensure reliability and the use of two raters was thought to enhance the design of the study. In the event that the two raters disagreed, the researcher made the final judgment. The researcher calculated inter-rater reliability using the kappa statistic, which determined if the agreement between the raters exceeds what would be expected



by chance alone (Cicchetti & Sparrow, 1981). Kappa levels that denote fair reproducibility range between .4 and .75, and a kappa level above .75 denotes a "strong agreement above chance" (Fleiss, 1981, p. 281). For this study, a kappa level above .75 was considered necessary for inter-rater reliability. An initial phase of the study was conducted to determine the efficacy of the raters' training, and to determine if acceptable levels of inter-rater reliability had been met.

As with all drawings, all forms of validity and reliability were of some concern (Palmer, et al., 2000). However, because the goal of this study was to assess the use of drawings as interpretive measures in family therapy, this project aided in the establishment of both construct and convergent validity of drawings as diagnostic measures of Bowenian concepts.

#### *Family Systems Assessment Tool*

The Family Systems Assessment Tool (FSAT) (see Appendix C) was developed by Dickinson, deGruy, Dickinson, Mullins, Acker, and Gilmer in 1996 to assess how familial interactions from the past influence interactions and relationships in the present (Dickinson, et al, 1996). The scale measures concepts both in the family-of-origin, and in the present day. The developers of this tool based their instrument on the theory of Murray Bowen, and his ideas on intergenerational dynamics (Bowen, 1978).

The FSAT consists of 31 items, each asking a question related to one of the seven subscales that comprise the test. The seven subscales measure Bowenian concepts and are as follows: cutoff, distancing, illness behavior, individuation, intimacy, psychosocial problems, toxic issues, and triangulation. The respondent is

asked to answer each question on a five point Likert scale (Strongly Agree, Agree, Neutral, Disagree, Strongly Disagree), with higher responses indicating greater functioning with a higher degree of individuation (Dickinson, et al, 1996).

Reliability and validity of the scale are considered adequate. Test-retest reliability ranged from .82 to .94, and all subscales were proven to have high levels of internal consistency ranging from .70 for the intimacy subscale, to .84 for the family-of-origin individuation subscale. Family-of-origin subscales had higher Cronbach's alpha levels (ranging from .75 to .84) than did current family subscales (which ranged from .71 to .83), and are therefore considered to be more reliable (Dickinson, et al, 1996).

Discriminant, construct, and convergent validity of the scale were determined by comparison with other instruments that measured similar phenomenon. The FSAT was compared to the Family Emotional Involvement and Criticism Scale (FEICS) (Shields, Franks, Harp, McDaniel, & Campbell, 1992), Family Adaptability and Cohesion Scales (FACES-III) (Leach & Olson, 2000; Olson, 1996; Olson, 1993; Olson, Portner, & Lavee, 1985; Thomas & Olson, 1993), and the Personal Authority in the Family System (PAFS-Q) (Bray, Williamson, & Malone, 1984). All correlations indicated the FSAT to be a valid instrument on all subscales, with the scales reflecting family-of-origin issues to have greater validity than the current family scales. Predictive validity studies were also done focusing on somatization and the use of the scale for predicting somatization disorders. The results from these studies indicate that there is an adequate amount of predictive validity for this issue, but with a caveat that there is a need for further investigation in this area (Dickinson, et al, 1996).

For the purposes of this study the researcher used scores on the individuation, distancing, and cutoff subscales.

According to the developers of the scale (Dickinson, et al, 1996):

Cutoff- Measures the extent to which one or more family members have become isolated or "cutoff" from the family. Cutoff implies an active process of avoiding the rest of the family (or being forced by the rest of the family to stay away) (pp. 69).

Individuation- This subscale measures how much family members are able to maintain their individual identities when around other family members.

Another way of looking at this scale is that it measures the amount that the family controls the behavior of family members. Fusion, as described by Bowen and others, is essentially a low level of individuation (Dickinson, et al, 1996; pp. 69).

Distance: A "nuclear family emotional system" mechanism which families use to avoid dealing with stress or conflict in the family or to divert attention from unresolvable or toxic family issues. "Nuclear family" was used in the descriptions of the concept by Bowen, but these mechanisms apply to any core family group. The distancing subscale measures the extent that family members use various behaviors to keep physical and/or emotional distance from the rest of the family. (Dickinson, et al, 1996; pp. 69).

#### *Demographic Questionnaire*

The demographic questionnaire provided the researcher with the following information: age, gender, ethnic background, size of family, marital status, and income

(defined as before age 18) (refer to Appendix B). All constellations of families were included in the data. This data was used to generate hypotheses for future research, and provided a general overview of the sample.

### *Design*

The study used a quasi-experimental design to determine the association between the presence of specific features in drawings and their corresponding indicators, as evidenced by scores on the FSAT.

Those individuals who drew an encapsulation/compartmentalization were predicted to also have test scores that indicated the presence of cutoffs. Drawings that contained figures that touched or overlapped were predicted to occur when drawn by individuals who had test scores that indicated low levels of individuation. Individuals who placed barriers in drawings were predicted to score high on the distancing subscale of the FSAT. As a result, the study used correlational data and no cause and effect relationship can be assumed.

### *Hypotheses*

Hypothesis 1. Individuals who use encapsulation and/or compartmentalization in family drawings will have lower scores on the cutoff subscale of the FSAT than individuals who don't.

Hypothesis 2. Individuals who draw figures that touch, are crowded (at least one figure that intersects with another based on placement of a grid over the drawing and viewing where the lines on that grid fall on the figures), or overlap in a family drawing will have a lower scores on the individuation subscale of the FSAT than those who don't.

Hypothesis 3. Individuals who draw family drawings with barriers contained within the drawing will have a higher score on the distancing subscale of the FSAT than those who don't.

### *Statistical Analysis*

ANOVAs were used to assess group differences between those individuals who scored as present or absent on the independent variables (the presence or absence of the various aspects of the drawings) and those who scored higher or lower on the dependent variables (the scores on the FSAT). According to Vogt (1993) ANOVA (analysis of variance):

A test of the statistical significance of the differences among the mean scores of two or more groups on one or more variables or factors. It is an extension of the t test, which can only handle two groups, to a larger number of groups. More specifically, it is used for assessing the statistical significance of the relationship between categorical independent variables and a continuous dependent variable. The procedure in ANOVA involves computing a ratio (F ratio) of the variance within groups (error variance) to the variance between the groups (explained variance). Note that the name "analysis of variance" is misleading because, strictly speaking, ANOVA involves analyzing sums of squares, not variances. (pp. 7)

Hypothesis 1: Individuals who use encapsulation and/or compartmentalization in family drawings will have lower scores on the cut-off subscale of the FSAT than individuals who don't. An ANOVA was used to assess group differences between those who drew their family with encapsulation/compartmentalization present in the

drawing and those with low scores on the cutoff subscale of the FSAT. For the purposes of this study encapsulation and compartmentalization was considered as one phenomenon.

Hypothesis 2: Individuals who draw figures that touch, are crowded (at least one figure that intersects with another based on placement of a grid over the drawing and viewing where the lines on that grid fall on the figures), or overlap in a family drawing will have lower scores on the individuation subscale of the FSAT than those who don't. An ANOVA was used to assess group differences between those who drew their family with figures that were touching, crowded, or overlapping and those with low scores on the individuation subscale of the FSAT.

Hypothesis 3: Individuals who draw family drawings with barriers contained within the drawing will have a higher score on the distancing subscale of the FSAT than those who don't. An ANOVA was used to assess group differences between those who drew their family with barriers present in the drawing and those with high scores on the distancing subscale of the FSAT.

### *Power Analysis*

A power analysis is used to determine the number of participants a study needs in order to determine if sufficient data is collected to find significant results. Four factors determine statistical power, the statistical test, effect size, sample size, and alpha level. The purpose of establishing statistical power is to avoid a Type I error wherein the null hypothesis is falsely rejected.

For this study, the following recommendations by Cohen (1988) were adhered to:  $\alpha = .05$ , medium effect size (ES) = .30, power = .80. In addition, the fact

that this study evaluated the presence or absence of the three independent variables: encapsulation/compartmentalization, barriers, and spacing as compared to the dependent variable of each's corresponding subscale on the FSAT was considered for the power analysis. This yielded a sample size of 90 participants.

## Chapter IV

### Analysis of the Data

This chapter will provide an overview of the data, statistical information on the study sample, a discussion of the drawing constructs and the idiosyncrasies of the drawings themselves, a review of the coding outcomes, hypothesis testing, and a summary of the chapter.

#### *Data Collection*

Data was collected through the solicitation of undergraduate students at a northeastern university. Following departmental approval, data collection took place over a period of two months late in the Spring semester of 2002. The researcher prepared 196 packets for distribution, handed out 136 and received 96 returns (70% return rate). Of those returned packets, three did not include drawings and therefore were not included in the study. The researcher compiled a list of those who participated in the study and each participant was given credit by his or her professor for taking part in the study. There were no participant requests to receive the results of the study.

#### *Descriptive Statistics*

Descriptive statistics compiled on the sample revealed the following data:

1. The mean age of all study participants was 19.6 years ( $SD=1.5275$ ). The median age was 19. The oldest participant was 26 and the youngest was 18.
2. Six of the study participants were married (6%), one did not specify a



marital status (1%), all of the others reported that they were single (92%).

3. Of the total sample, 59 (63.4%) reported that they were white or Caucasian, 6 (6.4%) stated that they were black or African American, 11 (11.8%) reported their ethnicity as Hispanic or Latino(a), 10 (10.7%) Asian, and 7 (7.5%) other, or did not specify a ethnic background.

4. The data on socioeconomic background did not consistently fall within any particular category, with 36 (38.7%) participants reporting an annual income of less than \$20,000 per year, 10 (10.7%) reporting an income between \$20,000 and \$30,000, 7 (7.5%) reporting an income between \$30,000 and \$40,000, and 38 (40.8%) reporting income over \$40,000 per year. Two individuals (2.1%) did not specify an annual income.

5. The mean number of family members per participant was 4.63 (SD=1.2492). The median number was 4, with a range of total number of family members from one to nine.

6. Of the total study participants, 40 were male and 52 were female, 1 person did not specify a gender.

7. The variable for encapsulation/compartmentalization occurred 25 times (26.6% of the total sample), the variable for barriers occurred 55 times (59% of the total sample), and the variable for spacing occurred 58 times (62%) of the total sample.

8. The total scores on the three FSAT variables (cutoff, distance, and individuation) were distributed as follows (see table 1):

Table 1

Descriptive Measures for all FSAT Total Scores

	score range	N	M	SD
total cutoff score	1-25	93	17.0538	6.1809
total distance score	1-20	93	11.7634	4.1004
total individuation score	1-25	93	15.0645	4.6105

*Coding of Drawings*

As an initial phase of the study two raters were solicited and selected to code the drawings for the study. One coder was a 4<sup>th</sup> year doctoral student in a Marriage and Family Psychology program, the other coder was an MSW who was employed at a local hospital. The coders were trained according to the guidelines set forth in the study's scoring manual (Appendix A). Training took place in the researcher's office, and lasted approximately two hours. Neither rater had any previous experience coding drawings, though both had basic knowledge of the use of projectives. Both raters had the opportunity to ask questions and obtain clarification on the distinction between constructs.

At the conclusion of training, each rater was given 20 drawings to code independently. The researcher also coded all drawings, with her coding serving as the standard for comparison. Neither rater was present while the other was coding the drawings, and neither had access to the other's score sheet. Rater 1 coded all drawings accurately. Rater 2 made one error in coding, but corrected this error when he was

asked to review the drawings a second time. Thus, there was a 100% agreement between the raters and the study continued to the formal phase.

The same two raters used in the initial phase of the study coded all drawings. Each was re-trained two weeks after their original training to ensure consistency in coding, and each was asked to re-code 10% of the drawings to prevent rater drift. Thus, all reasonable measures were taken to make certain that coding remained consistent. The rater's scores on all drawings were compared with each other and, when there was a disagreement, the researcher made the final decision regarding how to code that drawing. In total, the raters were asked to make 279 decisions regarding the drawings (scoring on three variables for each of the 93 drawings) and disagreed on ten of these decisions. Thus, there was a 96.4% agreement between raters on the drawings.

Using SPSS 7.5 to obtain a kappa statistic, inter-rater reliability was calculated after 45 of the drawings were coded, and again at the conclusion of the study. The initial analysis yielded a kappa of 1.0 for the encapsulation/compartmentalization variable, a kappa of .857 for the spacing variable, and a kappa of .847 for the barriers variable. The second analysis yielded kappas of .973 for the encapsulation/compartmentalization variable, .885 for the spacing variable, and a kappa of .911 for the barriers variable. A kappa of .75 is considered to denote "a strong agreement above chance" (Fleiss, 1981, p. 218) and was the targeted value for this study. Therefore, inter-rater reliability for this study is considered sufficient, and indicates that the scoring manual concretely reflects the drawing constructs as defined for this research.

*Drawing Constructs*

The current study measures the constructs of encapsulation/compartmentalization, barriers, and spacing.

Encapsulation/compartmentalization was defined for this study by criteria set forth by Peterson and Hardin (1997) as:

Encapsulation: This is scored when drawn lines, objects or walls completely enclose one or more individuals, separating them from the rest of the family.

The lines must be incorporated within the drawing to be scored as encapsulation (p. 76). Lines are considered to be incorporated in the drawing if they are part of the overall picture of that drawing.

Compartmentalization: This is scored when one or more family members are isolated from each other with lines, objects, or walls that extend to (or close to) the edges of the paper (Peterson & Hardin, 1997; p.76)

Touching, overlapping, and crowded figures were considered as one phenomenon which, for the purposes of this study, was labeled as spacing. Spacing was determined by the presence or absence of touching or overlapping figures as adapted from a checklist set forth by Fury, Carlson, Sroufe (1997). In addition, a grid-like overlay as used by Burns and Kaufman (1972) to determine if figures were crowded. The overlay was placed over each drawing to determine if any of the figures intersected with one another. It was concluded that the figures were crowded if one of the straight vertical lines from the grid, when placed over the drawing, pierced more than one figure.

Barriers, as defined for use in this study, followed the criteria set forth by Peterson and Hardin (1997) as:

Barrier: This is scored when the subject draws an object that provides an impediment between figures. The barrier may be realistic (e.g. a wall) or fanciful (e.g. a large flower) (p. 76).

Frequency of occurrence for each of the constructs was as follows: the drawing construct represented most frequently was the variable for spacing, which occurred a total of 58 (62% of the total sample) times. Barriers occurred next in frequency with 55 (59%) drawings reflecting this type of variable. Typically, a barrier was shown in scenes where family members were eating around a table (17 times or 30% of the total times this variable occurred), or where one family member sat in front of a computer (15 times or 27% of the total times this variable occurred). Other objects that created barriers included: televisions (7 scenes), vehicles (6 occurrences), doorways (3 occurrences), scenes where large trees or flowering plants separated two specific family members (5 drawings), household appliances (8 scenes), and other objects such as houses, sandcastles, or balls (4 occurrences). There were several drawings that included more than one barrier.

Encapsulation/compartmentalization occurred 25 times (26% of the total sample) and was represented in a variety of ways. Drawings in which one or more family members were enclosed in cloud-like formations, circles, or squares were the most frequently occurring type of this construct (9 drawings or 36% of the total drawings with this variable). Family members enveloped by furniture (6 drawings),

houses (3 drawings), vehicles (4 scenes), trees (1 depiction), in a coffin (1 occurrence), or in a split screen (1 drawing) occurred less often.

When coding spacing, figures that intersected along the grid lines were fairly common, with touching or overlapping occurring less frequently. Of those figures where family members were placed on the same grid line, there appeared to be large spaces between figures, with most drawings reflecting figures that appeared in different quadrants. Touching was present in 13 drawings, and there were 9 drawings in which no variables were present in the drawing. Most drawings however, contained more than one variable.

Because there are no known base rates that reveal the frequency of these drawing constructs in the general population, no conclusions can be drawn regarding the level of their presence in this study.

#### *Idiosyncratic Elements*

There were several drawings that portrayed family members to be in unique and noteworthy situations that were not evaluated for this research. There were four drawings (4% of total sample) that showed violence among family members (i.e. family members stabbing one another, family members plotting to "kill" one another), two drawings (2% of total sample) that depicted family members as angels with wings that floated above the other figures in the drawing, one drawing (1% of the total sample) that portrayed figures labeled "Mom" and "Dad" as puppeteers who manipulated the other figures as marionettes on a stage labeled "Hell", and one drawing (1% of the total sample) that had the family members reflect characters from

Star Wars. One individual (1%) of the total sample used stick figures to characterize his/her family.

There is no known literature that delineates the frequency of these various idiosyncratic features as a base rate in any population. As such, it is difficult to determine if these irregularities can be attributed to any dysfunction on the part of the sample.

### *Testing for Assumptions*

Data was tabulated and tested for assumptions. According to Norusis (1997), the assumptions needed for ANOVA are: independence, normality, and equality of variance.

The assumption for independence was met for this sample because there is no relationship between the groups being studied. In addition, there is no difference between individuals who lie within the same group. All are independent samples.

All FSAT scores were assessed for normal distribution using SPSS 7.5 with the total scores on the distance subscale and the individuation subscale producing normal curves. The total score on the cutoff subscale did not produce a normal curve, was not normally distributed, and did not contain any outliers. The curve for this subscale was fairly evenly distributed on all scores, without skew or kurtosis. As a further check on the data for the cutoff subscale, this time using a Kruskal-Wallis test—a less stringent test (Norusis, 1997), produced a non-significant result ( $p=.380$ ). This indicates that, while the data for the total scores of the distance and individuation subscales met the assumption for normalcy, the total scores on the cutoff subscale did not.

A test for homoscedasticity was done via a Levene's homogeneity-of-variance test with the results for total scores on the cutoff subscale ( $p = .185$ ) and the individuation subscale ( $p = .709$ ) yielding insignificant results, while the distance subscale produced a significant result ( $p = .047$ ). Thus, this assumption for homoscedasticity was violated on two of the three total score variables, indicating that the results gathered from analysis under ANOVA may be misleading, meaningless, or of doubtful validity (Vogt, 1993). However, because ANOVA is known to be a robust statistic (Koosis, 1997; Norusis, 1997), and because numbers from each group is somewhat similar (Norusis, 1997), further analysis was conducted to determine if any of the hypotheses for this research could be supported under this statistical procedure.

#### *Hypothesis Testing*

Each hypothesis was tested using an ANOVA to assess group differences between those who drew a specific variable in their drawing and those who had a lower or higher score on a targeted subscale of the FSAT. The statistical analysis was done using the SPSS version 7.5. Results are as follows:

Hypothesis 1: Individuals who use encapsulation and/or compartmentalization in family drawings will have lower scores on the cut-off subscale of the FSAT than those individuals who don't (see Table 2).



Table 2

Summary of Analysis of Variance for Hypothesis 1

		sum of squares	df	mean square	F	sig
total cutoff score	between groups	18.409	1	18.409	.479	.491
	within groups	3496.322	91	38.421		
	total	3514.731	92			

The significance level under this analysis exceeds .05 thus, this hypothesis was not supported.

Hypothesis 2: Individuals who draw figures that touch, are crowded (at least one figure that intersects with another based on placement of a grid over the drawing and viewing where the lines on that grid fall on the figures), or overlap in a family drawing will have lower scores on the individuation subscale of the FSAT than those who don't (see Table 3).

Table 3

Summary of Analysis of Variance for Hypothesis 2

		sum of squares	df	mean square	F	sig
total distance score	between groups	7.508	1	7.508	.444	.507
	within groups	1539.288	91	16.915		
	total	1546.796	92			

The significance level under this analysis exceeds .05 thus, this hypothesis was not supported.

Hypothesis 3: Individuals who draw family drawings with barriers contained within the drawing will have a higher score on the distancing subscale of the FSAT than those who don't (see Table 4).

Table 4

Summary of Analysis of Variance for Hypothesis 3

		sum of squares	df	mean square	F	sig
total individuation score	between groups	.139	1	.139	.006	.936
	within groups	1955.474	91	21.489		
	total	1955.613	92			

The significance level under this analysis exceeds .05 thus, this hypothesis was not supported.

*Summary*

This chapter provided a summary of the statistical analyses that were conducted on the data collected from 93 undergraduate students at a northeastern university. A descriptive analysis found that: 52 females and 40 males participated in the study (one participant did not specify a gender), the majority of the sample had never been married (92%), the mean age of the sample was 19.6 years (SD=1.5275), most reported an ethnic background of white or Caucasian (63.4%), the mean number

of family members per participant was 4.63 (SD=1.2492), and the most frequently reported annual income was in the \$40,000.00/yr. or above range (40.8%).

A series of ANOVAs was conducted to determine differences between groups who, when asked to complete a K-F-D, drew pictures that contained drawing constructs that suggested Bowenian principles. Specifically, the study looked to determine if the Bowenian principles of cutoff, distance, and individuation could be identified in drawings with encapsulation/compartmentalization, barriers, or closely spaced figures.

The data suggested that there is no relationship between groups who included the drawings constructs studied and those who did not, when also evaluating the perceived presence of the specified Bowenian principles.

## Chapter V

### Conclusions and Recommendations

#### *Problem Restatement*

The primary purpose of this study was to provide empirical data to support the hypothesis that the Kinetic-Family-Drawing (K-F-D) (Burns & Kaufman, 1972) could be used as a means of assessing Bowenian dynamics in the families of young adults. The study was seminal, and the results are meant as an initial exploration into this subject

In addition, because adults have not been studied with regard to projective drawings (Goodenough, 1926; Peterson & Hardin, 1997; Rubin, 1984), the study aimed to fill a gap in the literature in the use of the K-F-D with this population.

This chapter will include: a summary of the results, a discussion of the study outcomes, implications of the study, limitations of the study, and recommendations for future research.

#### *Summary of Results*

Three hypotheses were tested to evaluate if specific constructs in drawings related to components of the systemic theory of Murray Bowen (Bowen, 1978):

Hypothesis 1: Individuals who use encapsulation and/or compartmentalization in family drawings will have lower scores on the cut-off subscale of the FSAT than individuals who don't.

Hypothesis 2: Individuals who draw figures that touch, are crowded (at least one figure that intersects with another based on placement of a grid over the drawing

and viewing where the lines on that grid fall on the figures), or overlap in a family drawing will have lower scores on the individuation subscale of the FSAT than those who don't.

Hypothesis 3: Individuals who draw family drawings with barriers contained within the drawing will have a higher score on the distancing subscale of the FSAT than those who don't.

Drawings were collected from undergraduates at a northeastern university. All participants in the study provided a K-F-D, completed a Family Systems Assessment Test (FSAT) (Dickinson, et al, 1996), and filled out a demographic survey. The researcher collected all study materials and two raters, who had been trained by the researcher according to this study's training manual (Appendix C), coded the drawings. All drawings were evaluated for the presence or absence of: encapsulation/compartmentalization, barriers, and touching/overlapping/intersecting figures.

All hypotheses were tested by ANOVA using SPSS 7.5, and all were found to be not significant. That is, individuals who used encapsulation and/or compartmentalization in family drawings did not have lower scores on the cut-off subscale of the FSAT than those who did not. In addition, individuals who drew figures that touched, were crowded or that overlapped did not have lower scores on the individuation subscale of the FSAT than those who did not draw figures that touched, were crowded or overlapped. Finally, individuals who drew family drawings with barriers contained within the drawing did not have higher scores on

the distancing subscale of the FSAT than those who did not include barriers in their drawings.

### *Discussion of Results*

While none of the hypotheses were supported, definitive conclusions about the efficacy of using the K-F-D to assess Bowenian dynamics cannot be drawn. This study, seminal in nature, began to explore how the K-F-D may be used for family assessment and was not meant to be a terminal point in investigating this tool. In fact, the results from this study may be viewed as a means to research additional ways in which the K-F-D may be used as a tool for family therapists.

Conducting seminal research can be an arduous task. A study in an area that has not been previously tested creates a situation in which the researcher must prove something in an arena with minimal, if any, supporting information. Thus, while there are a few proposals in the literature about how family drawings can be used to assess families from a systemic perspective (Ford Sori, 1995; Fury, et al, 1997; Riley, 1990), the empirical literature is scarce. Further complicating this is the fact that it is difficult to conduct research involving projective instruments. There are many factors one must consider regarding the projectives, but one prevailing concern remains the number of studies needed to establish baseline occurrences and to set criteria for abnormality (Palmer, 1983). Therefore, this research has served the purpose of introducing this topic and providing a beginning from which other research can be generated.

*Sample Characteristics*

One factor to be considered when reviewing the results of this study focuses on sampling bias. The study participants all attended the same university, and only two undergraduate classes were used. The study took place toward the end of the spring semester during a time when several other studies were also being conducted. The study participants were either given credit for their participation or asked to participate as a course requirement. As such, the study participants were acknowledged for merely completing the study packets, not for their interest or effort. Consequently, emotional issues may not have shown up because the participants may not have been fully engaged in the study.

Because this study used the K-F-D with a non-clinical sample, the sample may not reflect the level of family dysfunction that the study required. When looking at cutoffs, a process requiring treatment (Bowen, 1978; Kerr & Bowen, 1988), there is a presumption that a "normal" population would have a certain degree of this phenomenon, but not to a pathological extent. Thus, it is reasonable to conclude that the findings from this study may be affected by the lack of perceived cutoffs found in the families of the individuals who participated in this research. This is further supported by the fact that total scores on the cutoff scale were the only variable on the FSAT that was not normally distributed. In addition, a clinical sample may be more invested in completing a family drawing because of the belief that the analysis that would accompany it would benefit the family's, or individual's, current situation. Repeating the study again with a clinical sample is warranted.

Age is another aspect of the sample that may have impacted results. The K-F-D was designed as an instrument for, is typically used with, and has been mainly researched with, children (Burns, 1982; Burns & Kaufman 1972; Burns & Kaufman, 1970; Fury, et al, 1997; Hackbarth, et al, 1991; Handler & Habenicht, 1994; Holtz, et al, 1980; Holtz, et al, 1987; McGregor, 1978; McPhee & Wegner, 1976; Mostkoff & Lazarus, 1983; Myers, 1978; Myers, 1975; O'Brien & Patton, 1974; Rabinowitz, 1991; Reynolds, 1978; Reznikoff & Reznikoff, 1956; Tharinger & Stark, 1990). As such, its utilization with a young adult population is an extension of the use of the instrument, and the validity of its applicability with this population requires further study.

Because young children often use drawing as a means of expression and draw without fear of scrutiny (Malchiodi, 1998b), their drawings may be more available to interpretation. Children draw freely and, as such, their drawings are rife with unconscious material (Klepsch, et al, 1982). The same may be true for young adults (Jung, 1956; Jung, 1959), but one has to consider that adults may withhold a certain amount of material due to their need to draw in a socially acceptable manner (Malchiodi, 1998b). Therefore, the results from this study may have been confounded by the use of defense mechanisms inherent to the age of the participants.

In contrast, the FSAT was developed for an adult population (Dickinson, et al, 1996). The participants in this study are in the late adolescent range. The researcher contacted one of the authors of the FSAT, Dr. Perry Dickinson, via e-mail (P. Dickinson, personal communication, June 6, 2001), to determine if the instrument could be used with an adolescent or early adult population. At that time, Dickinson



indicated that the FSAT could be used with a variety of populations, and that neither age nor gender would impact the results of the instrument. He stated that the psychometric properties of the FSAT were stable among groups, and that the FSAT had been used in studies with young adults without difficulty. He suggested that, with a college age sample, the use of only the family-of-origin scales, rather than the current family scales, would be most appropriate because college-aged individuals would most likely not have formed a new, stable current family unit (P. Dickinson, personal communication, June 6, 2001). Therefore, the family-of-origin scales were used.

The average age of study participant was 19.6 years old ( $SD = 1.5275$ ). It is conceivable that many of the study participants were at an age where opinions on family members and family situations may fluctuate greatly. These opinions may be affected by the fact that individuals of this age are in the initial stages of independence from parental supervision, and were in the first year of their college experience. Both of these events can be tumultuous (Blos, 1985), and may have led to spurious responses on the FSAT. Thus, while the FSAT may be used with young adults, and the results from the FSAT subscales in this study were homogeneous, it is possible that the results on the instrument would vary with the age of the respondent, and the fluctuating perception that that individual has about his or her family over his or her lifespan.

Another way to view this data is with perspective towards developmental normalcy. Distancing is normal in the late adolescent, early adult developmental stage (Blos, 1985). As such, the results from this study should be considered as reflective of

what is a current psychological phenomenon for the individuals studied. Thus, the results from the study could accurately portray current feelings about one's family.

When looking at the results of this study, one last factor must be taken into account regarding the sample. When estimating power for this study, a medium effect size was considered reasonable, and a sample size of 90 (Cohen, 1988) was computed as sufficient. It is possible that there could be some effect but that the effect is small. Hence, using a larger sample may have yielded different results by increasing the likelihood that the presence of specific drawing constructs are reflected in the Bowenian principles studied for this research. However, one must consider the clinical significance of using an instrument whose efficacy is small (Jacobson & Truax, 1991).

#### *Drawing Constructs and Coding*

The coding of the drawings was another factor that impacted the outcome of the study. The raters for this study had acceptable interrater reliability, suggesting adequate standardization of measurement, but not indicating anything about the study's outcomes. The interrater reliability merely shows that the two raters saw the drawing constructs in the same manner, not what these constructs are signifying. The study replicated coding criteria that had been used previously and, as such, coding standards were limited to the few studies that concretely measured the variables tested (Fury, et al, 1997; Peterson & Hardin, 1997).

For example, when measuring cutoffs this study utilized the definition established by Peterson & Hardin (1997), although the research on which this definition was based was more anecdotal than empirical. It is possible that cutoffs are

reflected in family drawings, but do not appear as encapsulation and/or compartmentalization. It may also be possible for cutoffs, or even distance, to appear in drawings based on how close or far apart the figures of the drawing are to one another. There are several studies that suggest this (Fury, et al, 1997; Holtz, et al, 1980; Holtz, et al 1987; Rabinowitz, 1991) but, again, the definitions used for these studies are based on anecdotal rather than empirical data. Clearly, if cutoffs and distance denote estranged relationships, then one could guess that someone experiencing these difficulties might place the figures in a K-F-D far apart. The question then becomes how to measure this and what a significant distance may be.

The problem with measurement begins with making a decision about how far apart the figures must be to state that the distance can be designated as "far apart." In essence, one can not arbitrarily say that 6", 4", figures that appear in separate quadrants, or figures spaced apart by 40% of the page is a notable distance between figures. These measurements should be based on previously recorded data, theory, or established protocol. In the case of the K-F-D, no such standardized criterion exists (Handler & Habenicht, 1994) and it is not known what is within normal range. The lack of previous research in this area makes concretizing drawing constructs an extremely difficult, but not impossible, task.

Many of the drawings completed for this study (45, or 48% of the sample) contained figures that intersected with one another when the grid-like overlay was placed over the top of the drawing. The typical presentation, which occurred on virtually all of these types of drawings, was one in which the figures were placed in quadrants, parallel to one another with no lines drawn between the figures. As such,

there was considerable distance between the figures, something that is in contrast with the concept of individuation, the Bowenian dynamic that was studied.

While quadrants have been studied by at least one researcher (Furth, 1988), most studies with a focus on the positioning of figures on the page concern whether or not the figure is placed on the left side of the page versus the right, or where the figure is placed on a vertical axis (Aschuler & Hattwick, 1947; Bussard & Kleinman, 1991; Jolles, 1971; Hammer, 1958; 1980; 1997; Klepsch, 1982; Levy, 1958; Machover, 1980). Hence, there is minimal data to suggest exactly what the placing of figures in quadrants may denote, and this was not the intention of the study here. However, it is certainly possible that the placement of figures in quadrants reveals something about the artist's family and systemic dynamics.

An additional factor to be considered is the prevalence of tables appearing as barriers (30% of the total times this variable occurred). While coding a scene depicting a family eating around a table as a barrier is in accordance with the literature (Peterson & Hardin, 1997), the possibility exists that this may, in fact, denote a nurturing family environment where all family members sit together to communicate and share a common experience. As such, coding a table scene as a barrier may be in direct opposition to what it actually may signify.

#### *Thematic Presentation*

The prevalence of modern themes, such as family members working on computers, or women with briefcases who are depicted as going to work outside the home, make the drawings collected for this study reflective of current times. A drawing wherein a figure is placed at a computer, at least for this study, was denoted

as a barrier. While this may still signify distance, as was the assumption in this study, it may also reflect a different Bowenian concept, societal regression (Goldenberg & Goldenberg, 1991).

In societal regression, Bowen asserted that the society that one is living in will impact differentiation in times of global stress (Bowen, 1978). To Bowen, society acts as a family by providing an emotional system prone to developing anxiety, lack of differentiation, triangles, and multiple generational processes of its own (Friedman, 1991). Bowen saw parallels between family dynamics and the dynamics of the society in which the family lives (Goldenberg & Goldenberg, 1991). Thus, in this study, the prevalence of computers (coded as barriers) may be reflective of the increased use of technology in our culture. What impact the distance that may be created by the increased use of technology is unknown, and was not researched here. However, one may consider what impact the increased use of the computer has on the family, how this affects closeness and distance and, in turn, individuation.

This idea has been researched previously by Holtz, Moran, and Brannigan (1987) who noted that spacing in drawings might have more to do with cultural and societal mores than emotional factors. Their study lends credence to the notion that spacing in drawings reflect patterns of societal regression, something linked to the Bowenian concept of individuation, but not measured here.

### *Implications*

While this study failed to produce significant results, it yielded ideas for future research and provided a base from which family therapists can utilize the K-F-D for clinical means.

Much of the literature on the K-F-D, and on using projective drawings in general, focuses on anecdotal data that emphasizes the therapeutic benefits to having a client or clients create art, or on the clinical material that can be presented in drawings (Allan, 1978; Bach, 1975; Bertoia & Allan, 1988; Burns, & Kaufman, 1970; Bussard & Kleinman, 1991; Claman, 1980; Denny, 1972; Furth, 1981; 1988; Fury, et al, 1997; Gardner, 1980; Hibbard, et al, 1987; Holtz, et al, 1980; Holtz, et al, 1987; Irwin, 1991; Kelley, 1984; Kellogg, 1969; Landgarten, 1981; Machover, 1953; Mango, 1992; Prinzhorn, 1972; Riley, 1990; Segal, 1984; Sims, 1974; Ulman, 1992). This previous research did not attempt to identify how clinical data can be measured, and the systemic issues that were studied were not researched from a theoretical basis. Therefore, this study brought attention to the need for a theory-based assessment of the K-F-D, specifically from a systemic perspective.

While this study did not attempt to investigate the therapeutic value in creating a K-F-D, it is apparent that clinical data is available from some of the more disturbing drawings that were presented. As such, it is reasonable to conclude that family therapists and other mental health professionals can use the K-F-D to elicit clinical data, which was the intention of the authors of the instrument studied (Burns, 1982; Burns & Kaufman, 1972; 1970). The idiosyncratic drawings, especially those that depicted violent scenes, lend credence to the notion that the K-F-D could be a valuable clinical tool that can uncover serious family pathology that may not be revealed through verbal communication in a therapy session. The low base rates of drawing constructs in this study, coupled with the fact that the study looked at group differences, may belie the fact that the K-F-D can tap clinical material. The fact that

this research uncovered apparent clinical material without attaining significance underscores the difficulty in conducting research with projectives, and with drawings in general. Repeating the study with an extensive multi-site sample may yield a significant result. However, the feasibility of conducting such a study is remote.

One additional implication of this study is that it further demonstrates that the K-F-D can be scored objectively, something few studies have addressed previously (Myers, 1975, 1978; O'Brien & Patton, 1974; Reynolds, 1978). It is noted that the previous research on scoring focused mainly on establishing interrater reliability and the definition of drawing constructs, rather than on the identification of how specific theoretical concepts could be revealed in the drawing. Thus, this study supplements the others by again finding that high rates of interrater reliability are possible if the drawing constructs are clearly defined, but expands on that research by seeking to establish clinical criteria to measure these drawing constructs against.

While the data failed to show significance, the study provided a first step into examining at how clinical phenomenon manifest themselves in drawings, how this can be tested empirically, and how rating criteria can be set up to accurately code drawings. This may lead to new ideas that focus on setting up a standardized scoring system for the K-F-D. While the study did not support the use of drawings for diagnostic purposes, it did underscore the need to combine the use of the K-F-D with a clinical interview in treatment. The clinical interview would be essential for illuminating why the artist choose to portray the family in a specific light, and would aid the therapist by providing additional information about the artist's feelings toward his or her family. This study highlights the importance of not using the K-F-D to draw

clinical conclusions regarding individual and family functioning, but to use the instrument as one source of input which could be integrated with other sources of clinical and diagnostic information.

### *Limitations of the Study*

There were several limitations to this study, many of them inherent in implementation of seminal work, and the difficulty associated with constructing a study that assesses drawing constructs.

1. The study did not measure if culture had an impact on the drawings.

Previous studies have noted that culture plays a role in drawings (Court, 1989; Fortes, 1981; Handler & Habenicht, 1994), but because this study expected to, and did obtain, a sample that was homogenous, the impact of culture on the drawings was not measured.

2. The average age of study participant was 19 years old. As such, it is possible that many of the participants had not formed a stable perception of their family unit, and were at a stage in development that can be emotionally confusing (Blos, 1985).

3. Though the sample was fairly evenly matched for gender, the study did not measure any effects of this variable.

4. There was a potential selection bias. The study was limited to one undergraduate institution and solicited participants from two classes who had had several opportunities to engage in research during the semester. The limitations from this situation include soliciting "tired" participants, or those students who tend to procrastinate and then hurry to complete an assignment. It is also limited by the



possibility that all individuals who participated in the study may have selected this particular university, and the course, for a similar, non- specified reason.

5. The study focused on one systemic theory (Bowen, 1978) that may not lend itself well to drawing assessment. In addition, the study focused mainly on two generations of each family, something that is inconsistent with Bowen's emphasis on a three generational system (Bowen, 1978).

6. The prevalence of themes, specific drawing constructs, and idiosyncratic elements seem to indicate that the K-F-D conveys specific data about the individual who creates it. However, because no base rate information is available that conveys the regularity of such occurrences, no definitive conclusions can be drawn. Without knowledge about the prevalence of such features, researchers are left with conjecture-something that is non-scientific.

#### *Recommendations for Future Research*

Several recommendations for future research are made to not only enhance this study, but to provide new ideas for studying drawings in other areas as well.

1. Expanding the research and altering the sample to include more diversity may help future researchers understand how culture, gender, and age play a role in projective drawing assessment.

2. Exploring how other theoretical principles are reflected in drawings can be achieved by altering the study to include other systemic perspectives.

3. The use of a clinical sample would be beneficial, because it would provide the researcher with a sample that has known clinical data to access. While this has been attempted with limited success previously (Palmer, et al, 2000), using a clinical

sample would eliminate the need to have a specific level of pathology to measure. In addition, it would also provide study participants who are potentially eager to engage in an activity they believe to be beneficial to their treatment.

4. The study focused on three distinct drawing constructs that were measurable, and were consistent with the definitions presented by previous researchers (Fury, Carlson, & Sroufe, 1997; Peterson & Hardin, 1997). While these constructs were clear, they confined to study to stringent criteria. Because additional constructs were noted in the drawings, such as figures appearing in quadrants, the definitions narrow focus of the study completed here (i.e. figures placed in quadrants appear similar to compartmentalization but with out the drawn lines demarking distance between the figures). Conducting the study under new definitions, or establishing base rates of drawing constructs is seen as a valuable form of new research.

5. There is a need to establish normative data regarding the regularity of specific drawing constructs in the general population. This information would aid future researchers in differentiating between what is considered to be a "normal" occurrence from those that are pathological.

6. Combining coding procedures such as those used in this study with qualitative measures (i.e. an interview with each participant) would help to establish what the artist was thinking about his or her family when drawing, and provide additional support for any findings uncovered through traditional quantitative research methods.

7. There is a need to look at how contemporary concepts can be viewed. Because there is a lack of current research on the K-F-D, this would help to establish

base rates of items such as computers and other means of technology and determine the significance of their appearance in drawings. As a further study, the impact of technology on the family could also be studied.

### *Conclusion*

This study attempted to determine if Kinetic Family Drawings (K-F-D) (Burns & Kaufman, 1972) could be used to assess the presence of specific Bowenian dynamics (Bowen, 1978) in a young adult population. A series of ANOVAs were run to assess whether encapsulation/compartmentalization, barriers, or aspects of spacing in drawings demonstrated the presence of cutoff, distance, or individuation respectively. None of the hypotheses were supported.

Because there was no former research in this area from which to build upon, the study was an initial attempt to demonstrate how drawings could be used to assess systemic principles. As such, much of the data that has been gathered is seminal, and is seen as a platform for future research that attempts to uncover similar phenomena.

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Appendix A  
Scoring Manual

**Scoring manual and protocol for assessing Bowenian dynamics using the Kinetic  
Family Drawing (K-F-D) in a young adult population**

**Created by: Dale DeGraw**

**October, 2001**

### Introduction

This manual has been devised for the purpose of researching the construct validity of using the Kinetic Family Drawing (K-F-D) to illustrate Bowenian dynamics in an adult population. It has been created specifically for use in a study to be conducted in partial fulfillments of the requirements for a doctoral degree at Seton Hall University, South Orange New Jersey. Two raters who have been trained according to the criteria set forth in this manual, and whom the study's author has trained, will conduct the scoring. Both raters will have minimal, if any, previous experience rating drawings. Scoring is based, in part, upon criteria established by Peterson and Hardin (1997), Burns and Kaufman (1972), and Fury, Carlson, and Sroufe (1997).

### Training procedure

Training will be conducted by the study's author at an office setting that is quiet and free from distractions. Training will take approximately 90 minutes to complete, and will consist of both didactic material (verbal explanations of criteria and definitions) and the experiential evaluation and coding of actual drawings. Drawings and other materials (such as the grid sheet) will be presented from two sources; Peterson and Hardin's 1997 book, Children in distress: A guide for screening children's art, and Burn's and Kaufman's 1972 book, Actions, styles and symbols in Kinetic Family Drawings (K-F-D): An interpretive manual. Following the verbal explanation of criteria and definitions, the study's author will code several sample drawings, and provide a rationale as to why specific coding was done. The trainees will be given an opportunity to ask questions and, when all questions are answered,

will be given 20 sample drawings to code. These drawings will be taken from the two books described above. The trainees will independently rate all 20 drawings and the researcher will determine an accuracy rate. The trainees will continue rating the drawings, as necessary, until each rater reaches a 95% accuracy rate on each scoring criterion, at which point training will be concluded. If more than 20 drawings are required, the raters will code drawings created by the study's author. Training will be conducted again at two-week intervals to ensure that criteria continue to be met, and that the raters adhere to the parameters of the study.

### Reliability

An initial phase will be conducted prior to the start of the study to determine inter-rater reliability. The researcher will calculate reliability using the kappa statistic, which determines if the agreement between the raters exceeds what would be expected by chance alone (Cicchetti & Sparrow, 1981). Kappa levels that denote fair reproducibility range between .4 and .75, and a kappa level above .75 denotes a "strong agreement above chance" (Fleiss, 1981, p. 218). For this study, a kappa level above .75 is considered necessary for inter-rater reliability. Inter-rater reliability will be calculated after the initial phase of the study, once 45 the drawings have been rated during the study (half the necessary drawings), and at the conclusion of the study. If inter-rater reliability is insufficient at the halfway point of the study, additional training will take place. Raters will be unaware of when reliability is being assessed. Rater drift will be determined by having each rater re-code 10% of the drawings to determine if rating remains consistent.

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### Intent of manual

The main purpose of this manual is to provide the objective scoring criteria for the raters to evaluate drawings used in this study. This manual contains both operational definitions and examples of items that can be scored, as well as those that should not be scored.

### Definition of terms

Scoring of variables will be for the presence or absence of specific constructs found in drawings. The variables are set forth and defined as follows:

Encapsulation: Encapsulation will be scored when drawn lines, objects or walls completely enclose one or more individuals, separating them from the rest of the family. The lines must be incorporated into the drawing to be scored as encapsulation (Peterson & Hardin, 1997, p. 76).

A drawing with a "frame" would not constitute encapsulation because the lines of the frame would not be incorporated into the drawing. In addition, a figure within a figure, such as when a fetus is drawn inside a pregnant woman, would not be scored.

If most of the figure is enclosed, such as when a figure is seen jumping rope, this should be scored as encapsulation. If a baby is enclosed in a bunting or other form of sack, this would not be scored because this would be a typical presentation for an infant and would not be considered irregular.

Compartmentalization: This scored when one or more family members are isolated from each other with lines, objects or walls that extend to (or close to) the edges of the paper (Peterson & Hardin, 1997, p. 76).

Compartmentalization can also occur when the individual folds the paper to separate figures (Myers, 1975).

Compartmentalization should not be scored when the lines or objects do not extend near the edge of the paper, such as when a smaller object (i.e. a cat or dog) is placed between figures.

Both encapsulation and compartmentalization can occur in the same drawing, and will be considered as one phenomenon for the purposes of this study.

Barrier: This is scored when the subject draws an object that provides a impediment between figures. The barrier may be realistic (e.g., a wall) or fanciful (e.g., a large flower) (Peterson & Hardin, 1997, p. 76).

Barriers are distinguished from encapsulation and compartmentalization because barriers do not extend to, or near, the edge of the page. Additionally, barriers are typically objects, whereas compartmentalization and encapsulation involve the placement of lines to separate figures (Myers, 1975).

Drawings where figures hold something aloft (i.e. a trophy or placing a star on a Christmas tree) should not be scored as barriers because this would not be an impediment between the figures.

Touching: Touching is scored when any two figures have physical contact with one another or with a mutually held object. Touching figures do not "collide" or overlap with one another.

If the drawing shows figures with a mutually held object that forms an impediment (i.e. a tall tree), this would be scored as a barrier, not touching.

**Overlapping:** This is scored when any figure "collides" with another, or when one figure obscures portions of another figure. A typical example of overlapping figures occurs when one figure is "in front" of another.

Transparencies (e.g. when one can "see through" a figure) should not be scored as overlapping.

**Crowding:** This is scored when two or more figures "intersect" with one another when a grid is placed over the top of the drawing. The grid is an 8.5" x 11" transparent sheet with vertical and horizontal lines marked at each millimeter which intersect at right angles perpendicular to each other and parallel to the edges of the sheet. The rater will place the transparent sheet over the drawing so that the sheet and the drawing are in complete alignment by the edges of the paper.

Crowding can be determined if one of the straight vertical lines from the grid, when placed over the drawing, pierces more than one figure. In essence, this occurs when any part of the figures are plumb, or in alignment with one another.

Crowding is not scored if figures are close to one another but a vertical line does not intersect them.

In this study, touching, overlapping, and crowding will be considered as one phenomenon.

All variables will be coded as present or absent for each variable regardless of the number of times the variable occurs in the drawing. For example, if a drawing has two encapsulations and an incidence of compartmentalization, this would only be scored as "present" on the variable of encapsulation/compartmentalization.

Procedure for coding drawings

1. Each rater will receive a packet of numbered drawings and a stack of rating sheets.
2. Select one drawing and place the number of the drawing on the rating sheet where it says drawing #.
3. Place your initials on the provided rating sheet where it says rater's initials.
4. Examine the drawing and determine if encapsulation is present in the drawing and mark your decision accordingly on the rating sheet (this is the first variable presented on the rating sheet). Additionally, indicate where and how encapsulation is present in the drawing (i.e. there is a figure on a swing in the lower right hand corner of the drawing), or why you choose not to rate the drawing as having an encapsulation next to the indicator section of the rating sheet. You may choose to leave this section blank if you selected "absent" for this variable, and do not feel a rationale is necessary.
5. Examine the drawing and determine if there are any instances of compartmentalization present in the drawing. Mark your decision regarding this variable, along with the indicator for presence or absence, in the appropriate location on the rating sheet (this appears second on the rating sheet). You may choose to leave the indicator section blank if you chose "absent" for this variable.
6. Examine the drawing to determine the presence of any barriers in the drawing. Mark your decision regarding this variable, along with the indicator, in the appropriate location on the rating sheet. You may choose to leave the indicator section blank if you chose "absent" for this variable.
7. Examine the drawing and identify if there are any instances of touching in the drawing. Mark your decision regarding this variable, along with the indicator, in the

appropriate location on the rating sheet. You may choose to leave the indicator section blank if you chose "absent" for this variable.

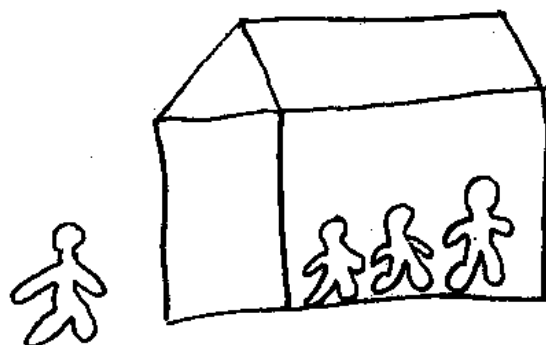
8. Examine the drawing and determine if there are any instances of overlapping in the drawing. Mark your decision regarding this variable, along with the indicator, in the appropriate location on the rating sheet. You may choose to leave the indicator section blank if you chose "absent" for this variable.
9. Place the grid sheet transparency over the drawing so that the transparency covers the entire page. Determine if, at any place in the drawing, figures are aligned so that they intersect one of the vertical grid lines. If any figures intersect with the same grid line, mark present on the rating sheet for the question regarding crowding. Provide an estimate of the location where the intersection occurred in the indicator section of the rating sheet. If no intersection occurred, leave the indicator section blank.
10. Proceed as above with all of the drawings in your packet until you have rated all the drawings.
11. Return the packet and rating sheets to the researcher.

Raters are encouraged to consult the scoring manual at any time during the rating process. Contact the researcher with any questions or concerns, along with a need for clarification of scoring if needed.

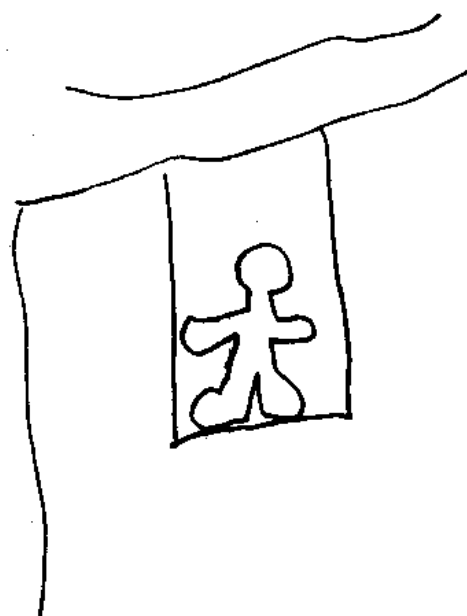
## EXAMPLES OF ENCAPSULATION



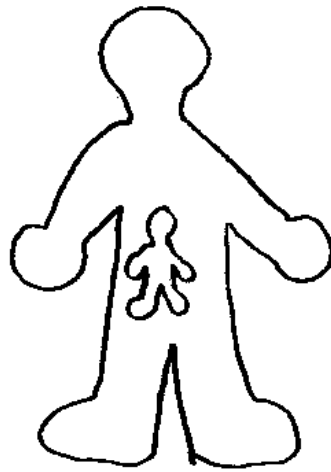
A figure jumping rope

Figures contained within  
a house

Any figure that is completely shaded in

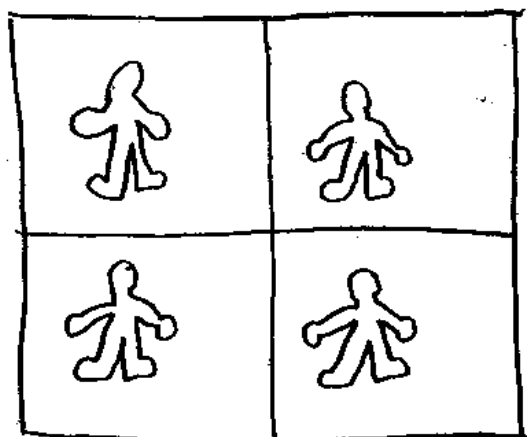


A figure on a swing

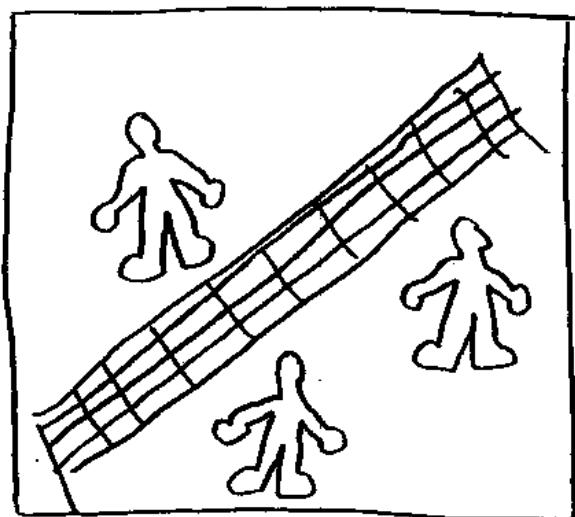
**EXAMPLES OF ITEMS NOT TO BE SCORED AS ENCAPSULATION**

**A figure within a figure, such as pregnant woman with her fetus being shown**

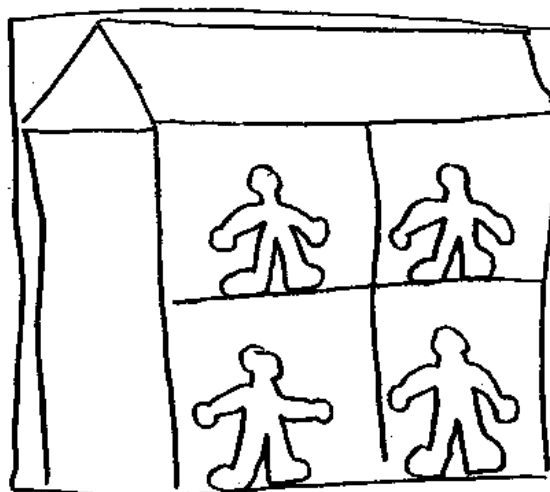
## EXAMPLES OF COMPARTMENTALIZATION



Figures that appear in  
marked quadrants

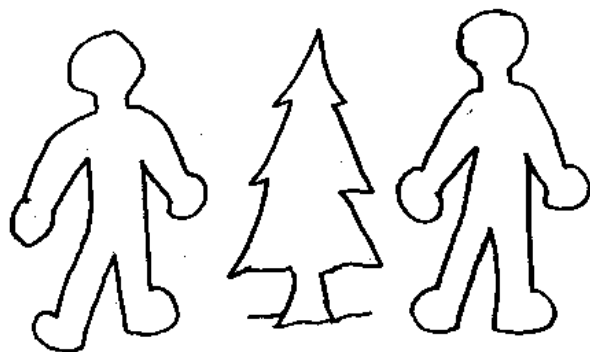
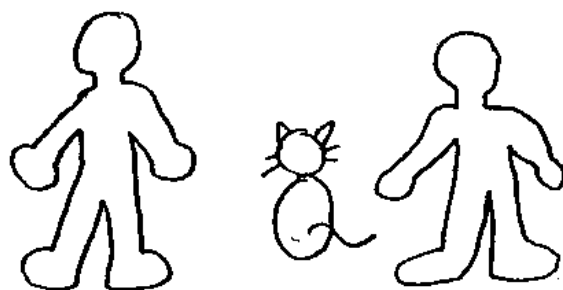


Figures playing  
volleyball

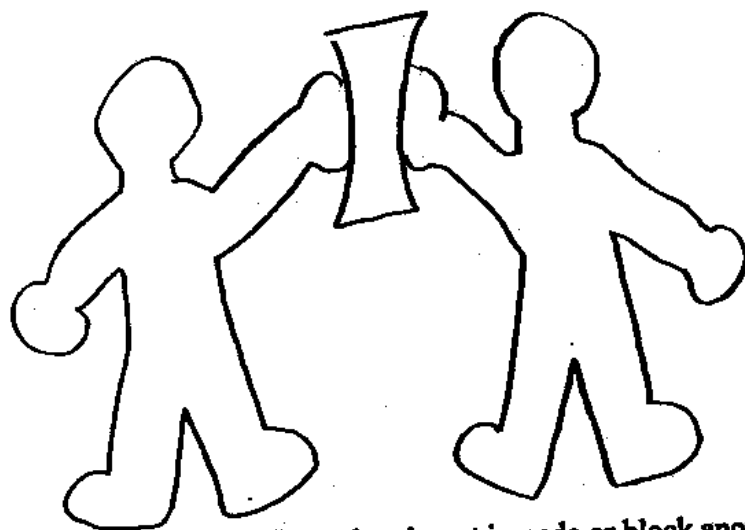


Figures in rooms of a house (also can be scored as encapsulation)

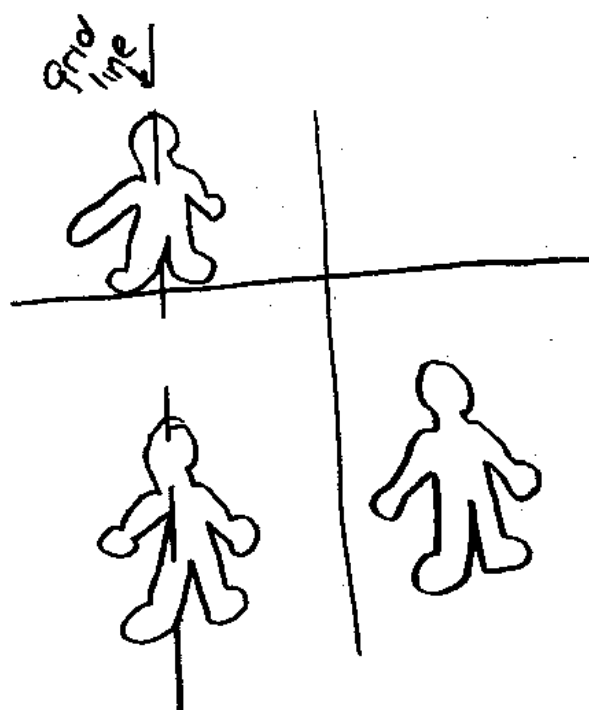


**EXAMPLES OF BARRIERS****Figures separated by a tree****Figures separated a pet****Figures sitting around a table**

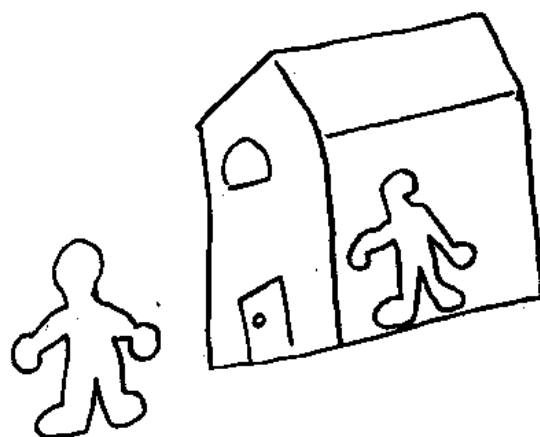
# EXAMPLES OF ITEMS NOT SCORED AS BARRIERS



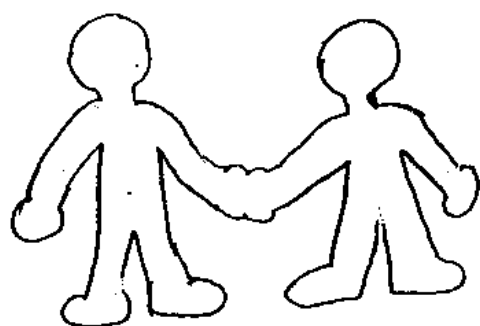
Figures that hold objects that do not impede or block another figure  
 EXAMPLES OF ITEMS WITH ONE OR MORE SCOREABLE ITEMS



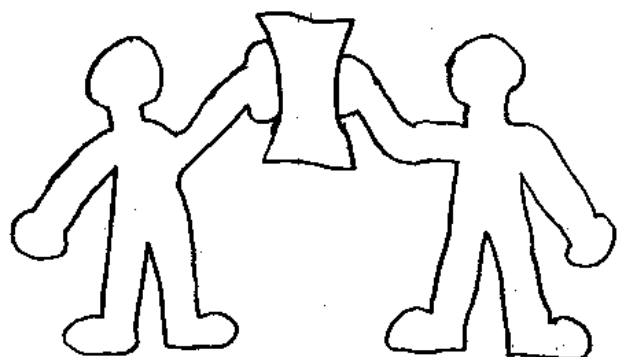
Compartmentalization and  
 crowding



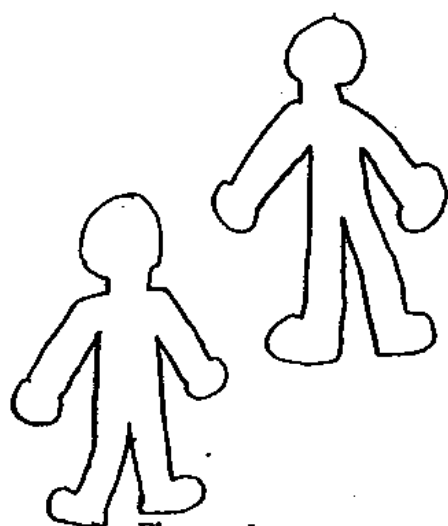
Encapsulation and barrier

**EXAMPLES OF TOUCHING**

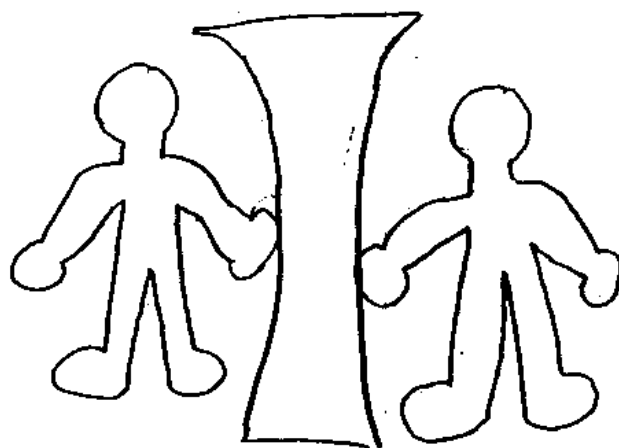
**Figures that are holding hands**



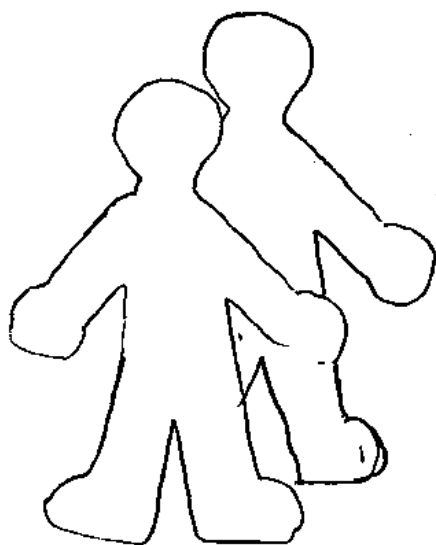
**Figures that hold a mutually shared object that does not form a barrier (is held aloft)**

**EXAMPLE OF FIGURES THAT DO NOT TOUCH**

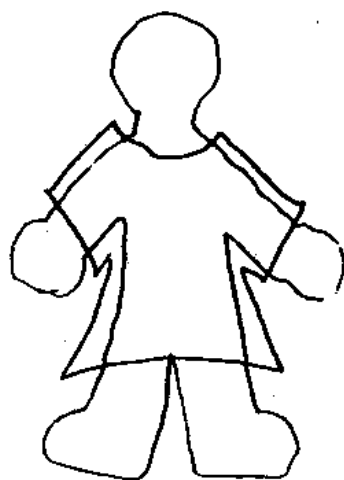
**Figures that are on top of one another**



**Figures that mutually hold an object that forms a barrier**

**EXAMPLES OF OVERLAPPING**

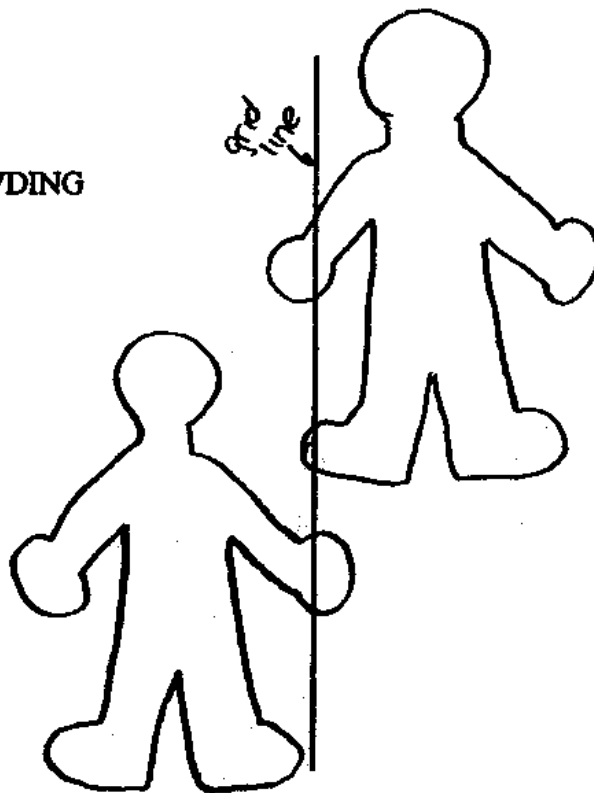
Figures that are "on top" of one another

**EXAMPLE OF FIGURES THAT DO NOT OVERLAP**

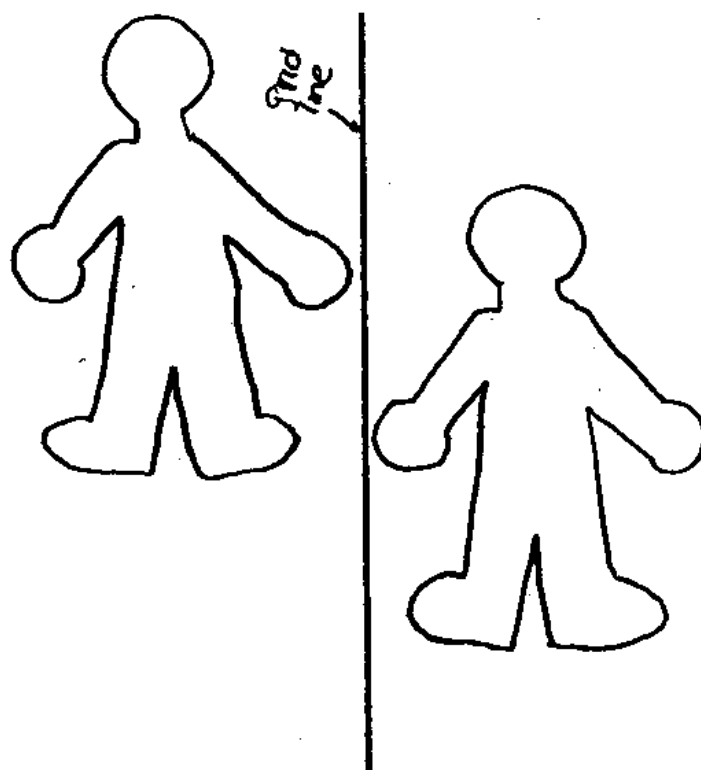
Figures that contain transparencies

## EXAMPLES OF CROWDING

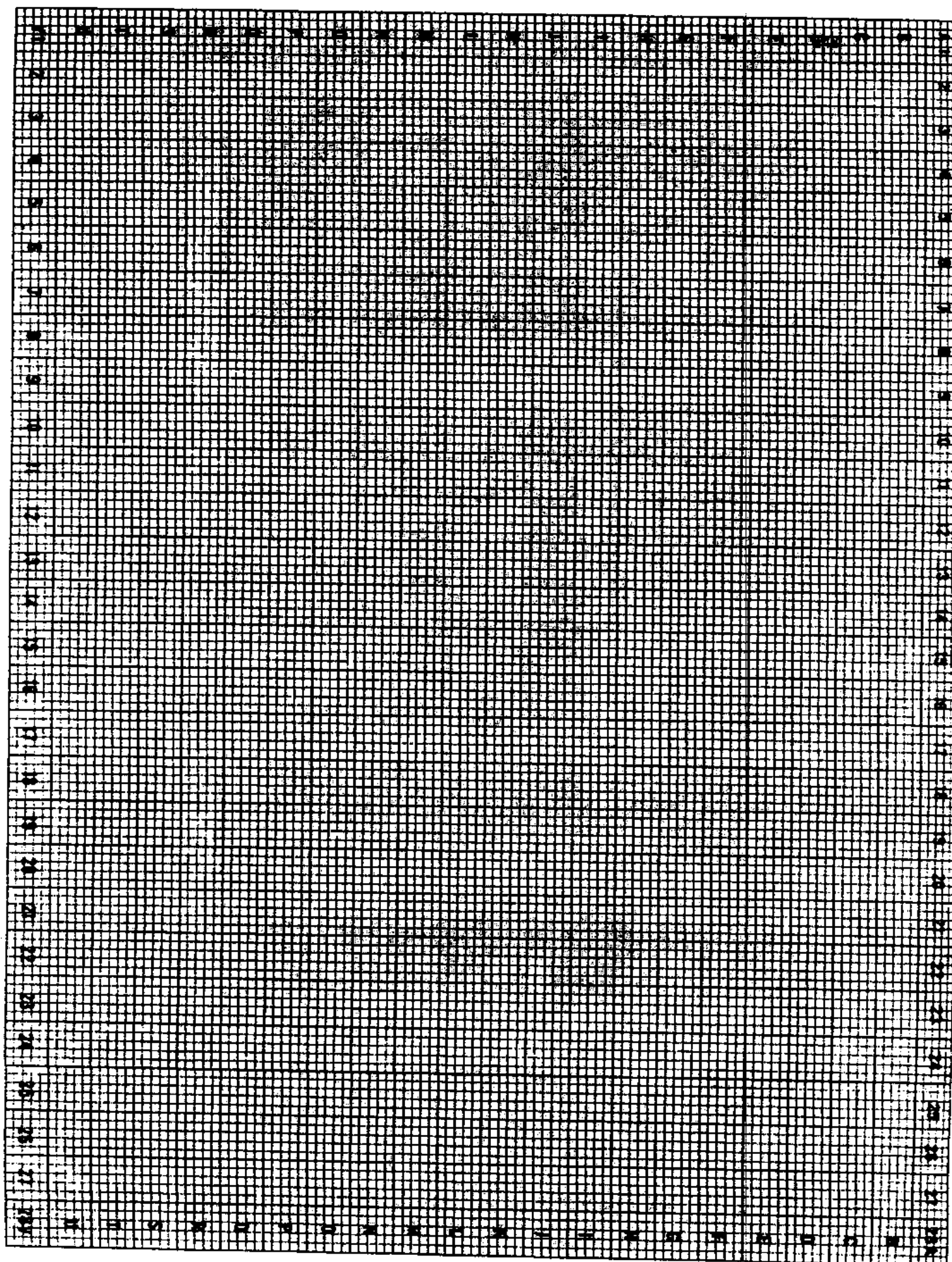
147



Figures that intersect when a grid is placed on top of the drawing  
EXAMPLES OF FIGURES THAT ARE NOT SCORED AS CROWDING



Figures that do not intersect when a grid is placed on top of the drawing



**Rating Sheet**

Drawing # \_\_\_\_\_

Rater's initials \_\_\_\_\_

Please evaluate and code the above numbered drawing for the presence or absence of the following features (circle your response and provide indicator):

1. Is encapsulation present or absent in this drawing?

Present

Absent

Indicator:

2. Is compartmentalization present or absent in this drawing?

Present

Absent

Indicator:

3. Are barriers present or absent in this drawing?

Present

Absent

Indicator:

4. Is touching present or absent in this drawing?

Present

Absent

Indicator:

5. Is overlapping present or absent in this drawing?

Present

Absent

Indicator:

6. Is crowding present or absent in this drawing?

Present

Absent

Indicator (indicate approximate location):

Is there a barrier or barriers present in this drawing?

Yes

No

Are there indications of spacing, touching, or overlapping (or any combination of these features) present in this drawing?

Yes

No



## References

- Burns, R. & Kaufman, S.H. (1972). *Actions, styles, and symbols in Kinetic Family Drawings (K-F-D) research and application*. New York: Brunner/Mazel.
- Cicchetti, C.V. & Sparrow, S.A. (1981). Developing criteria for establishing interrater reliability on specific items: Applications to assessment of adaptive behavior. *American Journal of Mental Deficiency*, 86 (2), 127-137.
- Fleiss, J.L. (1981). *Statistical methods for rates and proportions* 2<sup>nd</sup> edition. New York: John Wiley & Sons.
- Fury, G., Carlson, E.A., & Sroufe, L.A. (1997). Children's representations of attachment relationships in family drawings. *Child Development*, 8 (6), 1154-1164.
- Myers, D.V. (1975). *A quantitative procedure for evaluating the Kinetic Family Drawing (KFD)*. Unpublished doctoral dissertation: University of Georgia.
- Peterson, L.W. & Hardin, M.E. (1997). *Children in distress: A guide for screening children's art*. New York: W.W. Norton.

**Appendix B**  
**Family Systems Assessment Tool**

On the following pages you will find a study instrument (The Family Systems Assessment Tool). This is a simple questionnaire that asks that you answer questions about your family. It was designed to evaluate components about your family based on a specific family systems theory. Completing the questionnaire should take no longer than twenty (20) minutes. While some of the questions may seem personal, they are not designed to cause you any discomfort. When answering the questions you should carefully consider how the question pertains to the family you grew up in. By this, you should consider the family you spent the most time with throughout your childhood.

All questions should be answered using the attached answer sheet. You should answer the questions by marking your response in the appropriate area by noting the question number under each subsection of the questionnaire. Thus, you will be circling the response under one of the following categories: Strongly Agree, Agree, Neutral, Disagree, or Strongly Disagree.

Again, when answering each question please consider how each question pertains to the family you grew up in.

Thank-you for your participation in this study.

## Family Systems Assessment Tool

### Cutoff

1. A disagreement or event in my family has resulted in one or more family members being cut off from the rest of the family.
2. There are members of my family who don't talk to each other.
3. There are members of my family who I rarely or never see.
4. I have lost contact with some of my family members.
5. There have been disagreements in my family that have caused family members to stop talking to each other for a period of time.

### Distancing

1. One or more of my family members tends to pull away from the rest of the family when under stress
2. When there is a disagreement between two of my family members, they tend to pull away from each other instead of working it out.
3. One or more of my family members seems to work or stay busy most of the time, with very little time left to spend with the family.
4. One or more of my family members distances from the rest of the family during stressful times.

### Illness

1. Members of my family get sick a little easier than most people.
2. When my family is under stress one or more family members tends to have health problems.
3. I have a tendency to become ill during or soon after times of family stress or conflict.
4. Members of my family tend to worry about their health more than most people.

**Individuation**

1. Sometimes when I am around my family I get so frustrated that I cannot think straight.
2. Members of my family sometimes speak for each other instead of allowing people to speak for themselves.
3. Members of my family have sometimes made me feel very guilty about things I have done.
4. One or more members of my family are likely to become upset if other family members have views or beliefs that are different.
5. My family frequently tries to change some aspect of one or more family member's personality.

**Psychosocial**

1. During periods of family stress one or more of my family members tends to become too upset to function.
2. One or more of my family members tend to get attention from other family members because of being "stressed out" or having emotional problems.
3. Emotional problems have interfered with the life of one or more of my family members.
4. In my family children's behavior problems often happen at the same time as periods of family conflict and stress.
5. During periods of family stress one or more family members tends to get into trouble.

**Toxic Issues**

1. There are things that members of my family have done that are not discussed openly.
2. There are things I know or suspect have happened in my family that I don't talk about.
3. My family has one or more family secrets or "skeletons in the closet" that no one discusses.
4. There are one or more sensitive topics (such as sex, religion, abortion, or death) that my family members do not talk about.

**Individuation**

1. Sometimes when I am around my family I get so frustrated that I cannot think straight.
2. Members of my family sometimes speak for each other instead of allowing people to speak for themselves.
3. Members of my family have sometimes made me feel very guilty about things I have done.
4. One or more members of my family are likely to become upset if other family members have views or beliefs that are different.
5. My family frequently tries to change some aspect of one or more family member's personality.

**Psychosocial**

1. During periods of family stress one or more of my family members tends to become too upset to function.
2. One or more of my family members tend s to get attention from other family members because of being "stressed out" or having emotional problems.
3. Emotional problems have interfered with the life of one or more of my family members.
4. In my family children's behavior problems often happen at the same time as periods of family conflict and stress.
5. During periods of family stress one or more family members tends to get into trouble.

**Toxic Issues**

1. There are things that members of my family have done that are not discussed openly.
2. There are things I know or suspect have happened in my family that I don't talk about.
3. My family has one or more family secrets or "skeletons in the closet" that no one discusses.
4. There are one or more sensitive topics (such as sex, religion, abortion, or death) that my family members do not talk about.

Please provide answers to the preceeding questions according to the following scale:  
Strongly Agree, Agree, Neutral, Disagree, Strongly Disagree.

Questions should be answered according to how you feel about the family you grew up in.

	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
<b>Cutoff</b>					
1.	1	2	3	4	5
2.	1	2	3	4	5
3.	1	2	3	4	5
4.	1	2	3	4	5
5.	1	2	3	4	5
<b>Distancing</b>					
1.	1	2	3	4	5
2.	1	2	3	4	5
3.	1	2	3	4	5
4.	1	2	3	4	5
<b>Illness</b>					
1.	1	2	3	4	5
2.	1	2	3	4	5
3.	1	2	3	4	5
4.	1	2	3	4	5

	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
<b>Individuation</b>					
1.	1	2	3	4	5
2.	1	2	3	4	5
3.	1	2	3	4	5
4.	1	2	3	4	5
5.	1	2	3	4	5
<b>Psychosocial</b>					
1.	1	2	3	4	5
2.	1	2	3	4	5
3.	1	2	3	4	5
4.	1	2	3	4	5
5.	1	2	3	4	5
<b>Toxic Issues</b>					
1.	1	2	3	4	5
2.	1	2	3	4	5
3.	1	2	3	4	5
4.	1	2	3	4	5
<b>Triangulation</b>					
1.	1	2	3	4	5
2.	1	2	3	4	5
3.	1	2	3	4	5
4.	1	2	3	4	5



Appendix C  
Demographic Questionnaire

**DEMOGRAPHIC QUESTIONNAIRE**

Please answer the following questions about yourself. The data from this survey will be used solely for a descriptive analysis, and will not be used to identify you in any way.

Age: \_\_\_\_\_

Gender: M   F

Marital Status (circle one):

Single, never been married

Married

Divorced

Separated

Ethnicity: \_\_\_\_\_

Number of people in the "family you grew up in": \_\_\_\_\_

Annual income (circle one):

\$20,000.00/year or less

\$20,000.00- \$30,000.00/year

\$30,000.00- \$40,000/year

\$40,000.00 or more per year

**Appendix D**  
**Informed Consent**

My name is Dale DeGraw, and I am conducting a study as part of my doctoral dissertation in the Marriage and Family Therapy Program in the Department of Professional Psychology and Family Therapy at Seton Hall University in South Orange, NJ.

The purpose of this study is to determine whether specific aspects of family drawings reflect components of a particular systemic theory. Your participation in the study should take no longer than thirty (30) minutes.

If you agree to participate in this study, you will need to sign and date a consent form. Please return the signed and dated form to me by placing it in the envelope marked "consent forms family drawing study" which will be located in room 309 in Kozlowski Hall on Seton Hall's campus. You may keep a copy of this form for your records.

In order to participate in the study you will need to complete a demographic survey, draw a picture of you family, and complete a simple standardized test entitled, "Family System Assessment Tool." The Family System Assessment Tool is a brief survey instrument that asks the respondent to answer 31 questions about his or her family on a 5-point Likert scale. When you have completed all three of these items, you can return them to me in the envelope marked "family drawing study return packets" which will also be located in room 309 in Kozlowski Hall, adjacent to the area for consent form returns.

College of Education and Human Services  
Department of Professional Psychology and Family Therapy  
Tel: 973.761.9451  
400 South Orange Avenue • South Orange, New Jersey 07079-2685

**APPROVED**

FEB 20 2002

IRB

SETON HALL UNIVERSITY

Your participation in this study is voluntary. If you agree to participate, but decide to withdraw at any time, you may do so without prejudice.

The study materials (drawing, demographic survey, and Family Assessment Tool) have been coded by number, not name, so that you will remain anonymous. The signed and dated consent forms are being collected separately from the coded material to ensure that your confidentiality will be upheld, and that you remain anonymous.

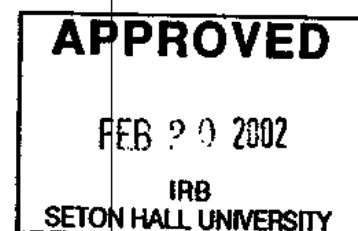
All of your responses will be held strictly confidential, and data will be securely locked in a cabinet which only the researcher has access to.

There are no known risks, either physical or psychological, associated with participation in this study. There are no expected benefits to you for your participation in the study however, your participation will help to forward our understanding of how family drawings can be used by marriage and family therapists.

If you have any questions pertaining to this research, or concerning your participation in this study, please do not hesitate to contact me. I can be reached through the Marriage and Family Therapy program office at Seton Hall University. The number there is: 973-761-9451.

This project has been reviewed and approved by the Seton Hall University Institutional Review Board for Human Subjects Research. The IRB believes that the research procedures adequately safeguard the subject's privacy, welfare, civil liberties, and rights. The Chairperson of the IRB may be reached at 973-275-2974.

I have read the material above, and any questions I asked have been answered to my satisfaction. I agree to participate in this activity, realizing that I may withdraw without prejudice at any time.



Subject's signature

Date

